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INTRODUCTION

What exactly does an animation producer do? Are all artists called animators? I want to develop an animated movie; where do I start? How do you put a production plan together? What is the most important element to ensure the success of an animated project?

Questions such as these initially inspired us to write *Producing Animation*. When we started our careers in the animation industry, there were few resources available that provided guidance to anyone interested in this highly creative and complex business. When searching for books to recommend to people interested on the topic, we quickly realized there wasn't a suitable title out there. Although there were many well-written and useful books that discussed the technical process and art of animation, there were none that outlined the actual nuts and bolts of producing commercially focused content for major animation studios and/or distributors. As this was a significant missing piece of the picture, we decided to use our combined knowledge and experience and take on the challenge of providing it.

The process of writing the book was a far greater undertaking than originally anticipated—but isn't that the reality of any creative project? Once it hit the marketplace, we were both thrilled with the response, and the stress of all the work it took quickly dissipated thanks to the positive feedback from our many readers. Although we could only have hoped for this result, the book has had a far larger global influence and reach than we had ever anticipated. Since it was published, we have received emails from places such as New Zealand, Brazil, and Tanzania. The book has been translated into Korean and Chinese. It is being used as a textbook in many schools in North America and is even being studied by film students in a school in Kenya. Over the past ten years, Catherine has traveled to the Far East to visit many studios in Asia and has been surprised and thrilled at the number of people aware of the book and using it as a guide. Animation production is now taking place globally, and the fact that *Producing Animation* is being used around the world is incredibly rewarding and exciting to both of us. With that in mind, you may have noticed that our new book cover illustration reflects this reality.

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We would like to express our deep gratitude for Animation World Network (www.awn.com) for providing us with a global reach through their dedicated link to portions of our book, in addition to hosting our website. And thank you to everyone who sent us correspondence: we really appreciated hearing from each of you and have used your feedback to help us shape the second edition.

Our goal in the original edition was to create material that was written in as timeless a way as possible. Given the state of the industry and the pace of technology, this has been a truly challenging task. Although much of the information contained in the original book has withstood the test of time, there are areas as we anticipated that have not. From the time that we started the book until it was delivered, there were so many changes happening that it was almost impossible to keep up with all of the industry innovations. We had no option but to finally put a stake in the ground and say it was completed. At that time, the animation industry underwent phenomenal changes through technology and the Internet. When we started, computer-generated (CG) films were few and far between and traditional 2D was commonplace. In the more than ten years since the book was written, the industry—as expected—has flipped: CG is commonplace and the process of traditional 2D is now considered a rare technique. Stereoscopy, or 3D, was not a common concept and has since become a household word. At the time, the majority of feature work was done domestically, and TV projects were produced in partnership with subcontractors in Asia and Europe.

Since delivering the manuscript for that first edition, the pace of change has increased exponentially in all areas of the business, from processes to distribution. Thanks to technological innovations, the options for production and distribution of content are now endless. As such, we have found that attempting to provide a clear definition between different formats is almost impossible. A project can now be produced by one person in a basement, or by hundreds of artists at a single location or globally, in multiple locations with multiple time zones, cultures, and languages. It can be marketed, sold, and distributed in any length, at all types of budget ranges from hundreds of millions of dollars for a feature to a budget of less than a million. The quality ranges are equally as extreme, from stick figures to fully fleshed-out characters that seem to live and breathe. Projects can now be distributed by an individual through the Internet or by a major studio theatrically—in either case, reaching millions of viewers. Content can be viewed on a screen that takes up an entire theater wall, or on one the size of a watch, or on the complete range of sizes in between. Creatively, the industry has become highly fractured, as has the money allocated. What has been consistent is that the majority of the budgets have decreased, and this change has

forced producers to seek innovative and cost effective ways of producing content. More and more studios have set up offshore locations and created "virtual studios" to help keep costs in check and competitive while tapping into the industry's rich international pool of talent.

Although we both wanted to revisit the book over the years, our heads would swirl every time we attempted to consider it. It seemed that no matter when we started, we would be out of date before the book went to print. On a personal note, there has been a positive side to this delay. We have each continued our lifelong education in this phenomenal industry, which has provided us with more insight to share. Over the years, we have found that the amount of information to absorb is truly endless, which is why we both love it. With that said, as more than a decade had passed and our children have grown, we felt it was time to tackle this next edition and that we couldn't wait any longer.

When we first set out to write *Producing Animation*, it was a much simpler process to define the differences between the formats in order for the book to be as universally applicable as possible. It was easy to differentiate clearly between feature, DVD, and television production processes and methodologies. Given the current landscape and all of these many changes and options for delivery, we made the decision to write the new edition using "feature production" as an umbrella term to cover all projects that run longer than 60 minutes, such as theatrical releases, DVDs, and high-end specials, and "television production" covering short-form content that runs less than 60 minutes, ranging from material made for television broadcast, mobile phones, Internet viewing, and anything in between.

Along with the challenge of defining key formats, we discovered that it was no longer possible to offer a generic production pipeline based on a "best practices" evaluation. Since there are multiple pipeline model choices applicable for all different circumstances, there is really no one established model or approach that fits all; rather, the industry is filled with constantly shifting and improving options. Once again, we made the decision to put a stake in the ground and offer a model that was based on feedback from industry colleagues and our combined knowledge. Our goal is to provide a workflow for CG, traditional 2D, and digital 2D projects that is as generic as possible. We have defined processes in a way that enables a reader to tailor them to his or her individual project, scaling up and or down, depending on the availability of resources.

Although animation is truly collaborative and no one person is responsible for getting a project done, a great producer is instrumental in creating an environment that leads to a positive experience for everyone involved. Everyone has the same end

goal to produce a product they can be proud of; projects that flail are typically missing the leadership of a strong producer with proactive communication skills and an in-depth understanding of the process. Many of the lessons we have learned over the years are fundamental to the business, regardless of the format or methodology. Although the change in the industry over the past ten years or so has been significant, the information pertaining to the role of the producer from the original book has remained the same. The integral concept—that producing animation is based on the ability to think logically, proactively, and creatively—still holds. It is a cerebral act that combines a technical knowledge of the animation process with individual style, experience, and gut instinct.

Part of the problem of defining what an animation producer does is that the job function is truly amorphous. Throughout the animation industry, there is still no single definition of what a producer does. And the role that animation producers play on each project changes constantly. A producer's domain varies from production to production, as well as from studio to studio. The positive side of this variability is that producers are often able to shape the production to fit their own experience and expertise. On the flip side, it can lead to untested modes of production that can result in costly overages and frustrations for all involved.

In our opinion, the producer is the one person with the full overview and responsibility for a project from a creative, financial, and scheduling perspective. Based on the creative expectations and fiscal parameters of the project, the producer pulls together a team of artists, technical directors, production management staff, and all other types of talent in between. Partnering with the director, the producer has the role of keeping everyone inspired and on track with regard to the project's overarching vision. While balancing and understanding the creative needs of the story being told, the producer sets up and manages both a production schedule and a budget, aiming to deliver the product at the agreed-upon level of quality. The producer is also in charge of keeping both the executives (or buyers) and the production team enthused and motivated. As this role is all-encompassing, the knowledge base and skill set required to become a producer is quite extensive, thereby keeping the job both exciting and enticing because it is never the same.

Our combined experience in the animation industry has been quite varied. Both of us progressed up through the ranks, and between the two of us, we have worked in almost all production capacities at most of the major studios. Our combined job titles have included coordinator, production manager, overseas production manager, associate producer, line producer, co-producer, producer, executive producer, production executive,

senior vice president of production, and company president. We have been involved in many different kinds of projects, including feature films, direct-to-video releases, television series, television specials, and short films.

For this edition, we are fortunate to have a third member added to our team: Tracey Miller-Zarneke. Tracey joined us as technical editor. She has been a formidable force and has played a fundamental role in helping us pull all of the aspects of the book together. Tracey has a background in animation production and an avid interest in the art itself, having written numerous books about the development and making of feature projects. She has been a tremendous help and support throughout this exciting undertaking. In a few words, we simply couldn't have done it without her.

Whether it's a new property or well-established brand, the goals are the same: to create timeless, relatable characters that touch people and make them laugh. Over the years, I (Catherine) have had the opportunity to work with and have been influenced by some incredible talent from visionaries such as George Lucas, Chris Meledandri, Peter Chung, and Ralph Bakshi to many other creative talents, both established and up and coming. Although each of these storytellers had his or her own unique approach to telling animated stories, they had one thing in common: a clear vision of the project, with an innate understanding of the characters they were bringing to life and a true respect for the parameters we were working within. What I have gleaned from these experiences is that regardless of the budget or timeline, a strong story with compelling characters whose fate you care about is key to success. More importantly, I learned that a project should not go into production until all of this information is developed and agreed upon by all key stakeholders, and that it is my job as a creative producer and/or executive to make sure this is the case. If a project is an established brand, such as *Star Wars*, *Ice Age*, and *Barbie*, it is critical that the rules of the characters in the medium of animation are understood and respected by all. It is of the utmost importance that animation enhance and further build on the original material in a timeless and thoughtful way, as opposed to one that allows for short-term gain yet ultimately is damaging to well-known and loved characters. This type of foresight and planning will help ensure a property's longevity and status. Once these many key understandings and elements are in place, I get no greater thrill than putting teams of people together to realize a vision to either build or to further establish timeless brands in the marketplace.

Launching an animated project, studio, or business enterprise in a successful manner requires that the producer be given enough time to determine the best way of proceeding, as opposed to rushing forward without a clearly laid out plan. When I am operating as either a producer and or executive in this industry, I find that there

is no one magic formula to be followed, but rather a wide range of possibilities, each with its own merit and value depending on a project's goals. No matter what choices are made, the critical step is developing and implementing a communication strategy that gets everyone clearly on the same page. The communication needs to be updated constantly as the rules change and creative priorities shift. Balancing all of this is a never-ending puzzle that requires an ongoing stream of strategic analysis, creative thinking, and problem solving that doesn't stop until the final frame is delivered. Leading teams and keeping them inspired takes unwavering commitment, especially when times are tough. As everyone is looking to you to lead them through the maze of decisions and challenges, it takes strength, fortitude, and a lack of ego to determine a path. More importantly, creating a "fear-less" environment—in which everyone can speak up, as opposed to a "fear-based" one in which the team keeps their thoughts to themselves for fear of being shot down—is necessary in ensuring that the whole crew is invested in and passionate about key decisions made. This sort of atmosphere allows everyone to be focused on the important issue of how to get the project done and thus poised for success.

Since writing the first edition, I (Zahra) have had the pleasure of working on large-budget productions, consulting on independent feature films and television series, and producing and directing my own short projects. Each project has had its own intrigue and path that followed. "There is no such a thing as 'can't be done'" is one of my favorite quotes because animation allows you to realize any creative vision. It is just a matter of pinning down that ever-elusive dream of possibilities. Though creativity can and should spin in multiple directions, as a producer, it is my job to partner with my director and together find the right course for the project within the confines of our time and budget. Finding that "truth" in the story that resonates with the audience and allows them to be emotionally transported is a necessary journey. It can be a fun adventure or highly treacherous, and anyone who tries to take a short cut pays a price. Akin to a marathoner, you have to reach inside to find that reserve and dig deeper and deeper as challenges arise. Do this and I assure you that all your hard work will pay off.

An animator once told me that he literally couldn't wait to jump out of bed every morning and come to work. He added that his whole crew felt the same way and that the weekly paychecks were just an added bonus! Hearing that comment was a gift to me because it confirmed my strong belief that it all starts when you create an environment in which a collaborative atmosphere is encouraged and everyone's contribution is appreciated. In other words, even though the artists typically don't have a financial stake in the film, they are still fully invested in its success, take pride in their work, and want to give their all to support the director's

vision. Partnering with your director, you create a family that must be nurtured and nourished. Together you can push towards new creative boundaries while the project's fiscal limitations allow you the opportunity to perfect your juggling skills and develop more efficient processes and procedures. On a personal level, I am completely intrigued by how digital 2D has enabled me to explore childhood stories and collaborate online with an animator who is brilliant enough to wear multiple hats, not just generating gorgeous artwork but also taking a project from concept to final delivery. I am incredibly proud of how our book has triggered newcomers to enter this arena and the way technological innovations have leveled the playing ground to the point where you no longer need a substantial budget to reach an audience: it's amazing how a good idea showcased on the Internet that hits the right spot can go viral and provide the stepping stones for a successful future career.

In our previous edition of this book, we shared many first-hand anecdotes of our experiences, and these were well received. Taking a new approach, we decided to open the book up to other people in the industry and have included what we have called "sidebars" or points of views from animation professionals from all corners of the business. We have been fortunate to get feedback from an amazing cross-section of experts from most of the major studios in the industry, each of whom provide incredible insights and unique perspectives. Information shared includes, for example, what an agent or manager looks for when choosing clients, or how to maximize your core team, or what a producer needs to think about when creating content for a stereoscopic theatrical feature, to name a few topics.

The intended audience for *Producing Animation* is broad, ranging from film students to industry professionals. Keeping in mind that each situation is unique, in this book we have attempted to define and clarify the process and procedures of producing animated projects with the focus on large-scale projects, with the assumption that the information can be applied with different levels of complexity according to a production's budget and plan. Our primary goal has been to create a basis from which a producer can springboard and structure a production based on its individual needs. This book takes the reader through all the steps necessary to set up a project, including selling an idea, developing and preparing a concept for production, as well as the actual production process. For the entrepreneur producer who is trying to sell his or her project, this book will describe the role of and identify the types of industry professionals to contact. For the student or line producer who may be strictly interested in the production phase, we offer detailed information on how to budget, schedule, and track a project, as well as actual charts that can be used for such tasks. For professionals needing a basic

knowledge of the animation business, this book provides answers to commonly asked questions, along with an overview of animation methodologies.

We sincerely hope that by sharing our experiences, as well as those of others, we can help pave an easier path for future animation producers. Additionally, it is our goal that the information in this book will entice new producers to enter the industry, and along with professionals already in the business, together they will continue to push the frontiers of animation to more exciting and unforeseen territories.

Welcome to the wonderfully creative, consistently unpredictable, and always exciting world of animation production. After reading this book, we hope you feel better prepared for its unexpected and expected challenges, as there is nothing more satisfying than seeing the results of your hard work moving on the screen and watching the audience respond to it in a positive way.

Commonly Asked Questions about Producing Animation

How do you become an animation producer?

The best schooling for a future producer is to begin as a production assistant and work up through the ranks of the production team. Starting from the ground up on an animated picture gives you the advantage of learning the process on a practical basis and often helps you gain a deep appreciation and respect for the talent of both the artistic and the production teams. As a production assistant, you work directly with the artists, which allows you to get firsthand experience on how artwork is generated and handled. You will discover the detailed nature of animation, and why even the slightest mistake such as misnumbering a storyboard panel or labeling an asset with the wrong code can quickly derail the production.

The next step up from production assistant is called coordinator, or assistant production manager/production department manager (APM/PDM). The titles used for this position vary depending on the studio's structure and the project's format. In this role, you are the liaison between the production manager, the department supervisor, and the artists. It is your job to keep the artists on schedule and track the flow of artwork. This position is highly beneficial, as you will begin to develop the ability to create schedules and also better your negotiating skills. You will be able to estimate how many artists are needed in order to meet the weekly quotas and gauge an approximate amount of time required to complete a given piece of artwork. Establishing a good

relationship with the artists and knowing how to motivate them is another key lesson you can learn in this position.

During weekly meetings held to review the artwork with the director, you get to see why a shot may require revisions and what creative solutions are used to fix the problem. Having successfully managed your team of artists, you may then be considered for the role of production manager.

The production manager takes on increased responsibilities, such as directly managing members of the production crew and artists from a budgeting and scheduling standpoint. With the aid of coordinators or assistant production managers, it is up to the production manager to keep the entire production on schedule. Although you may not be privy to the actual dollar amounts allocated to each category, with guidance from the producer, your primary goal is to stay on budget based on the allotted number of weeks scheduled. You will use these figures as a guideline to meet the production's objectives. As a production manager, you will wear many hats as you begin to work with both the creative and the business sides of a project. You will have the power to hire freelance artists and make deals with them in accordance with the budget. Most important, this role offers the ideal opportunity for you to shadow the producer and learn as much as possible. (For more information on roles of the management team, see Chapter 7, "The Production Team.")

Proving that you are able to meet deadlines, understand the production process, and complete a project within the allotted time indicates that you are prepared for the next challenge: taking on the duties of an associate producer or line producer. In this position, you are responsible for the overall financial aspect of a production, along with keeping it on schedule. Having now worked on numerous projects, you are knowledgeable about the creative needs specific to each show. By attending casting and recording sessions, you have learned what qualities to look for in a performer during an audition. You can assess what makes a good story. You are able to recognize strong character design and understand the importance of color choices. In this position, you can further sharpen your deal-making skills as you get exposed to how the producer and the business affairs department negotiate contracts with artists, voice talent, and writers. By now, you have had sufficient training and should be able to create budgets and schedules and put together crew plans.

Each of your varied experiences should have taught you to think strategically, understand story structure, and balance both the creative and business ends of the process. You should be able to troubleshoot by quickly coming up with alternate options when faced with a problem. Once you have reached this point in the production hierarchy, your next advancement is to step into

the shoes of a producer. (For more information on the different types of producers and their respective duties, see Chapter 2, "The Animation Producer.")

Are all artists called "animators"? What exactly is an animator?

It seems logical to call all artists working on an animated project "animators," but it is not accurate. An animator can take a design of a character or an object and bring it to life through creating its movement and action. The animator's role can best be likened to that of an actor. Just like any other performer, whether it is in the theater, the opera, or the ballet, he or she takes center stage. But it is through the combined efforts of many talented individuals—such as visual development artists, storyboard artists, editorial staff, layout artists, modelers, surfacers, technical directors, and many other staff members—that a show gets completed and presented to the public.

What skills are required to get into the field of animation?

People often ask how to receive training in three main job categories: (1) an artist; (2) a member of the production staff; or (3) as voice talent.

Artists

The most important tool artists can have is a *portfolio*, or a sampling of their best work. The portfolio is typically kept online on a professional website (not a personal blog), on a reel that can be passed along via DVD, in a hard copy folder, or some combination thereof. In any method of presentation, it is the most informative calling card an artist can present. If you do not have a portfolio, you must prepare some initial artwork to start building one. Taking classes offered at animation colleges or at the animation union are good places to begin accumulating samples of your work. When considering schools, make sure their program aligns with your area of interest: if you hope to be a generalist or don't know which area interests you, find a program that offers a broad curriculum so that you can investigate your options and discover what best matches your skill set.

For those artists who already have a portfolio, it is important to keep it up to date with your most current work. Keep copies of artwork from previous projects you have worked on, but be sure to respect all confidentiality agreements, especially on projects that are yet to be released—you certainly don't want your potential new

employer to see that you are irresponsible with such nondisclosure situations. Recent sketchbooks should also be included, but note that many studios will not return materials submitted, so be sure to offer copies or originals that you are willing to part with. If you have many years of accumulated artwork, it is always wise to get help from fellow artists to select your strongest work. You should also research the show you are applying for and make sure that your portfolio includes artwork that is suitable for the project.

Video compilations should be no longer than two minutes in length, unless otherwise designated in the submission instructions. If presented on DVD, they should be formatted to play on a computer or DVD player, not in data mode. If you present your reel via your website link, know that such a submission can be hit or miss if the playback isn't great. Be sure to provide a reel breakdown, outlining each shot on your demo reel and what work you did for the shot (modeling, animation, etc.). It is handy to provide a thumbnail of the shot on the breakdown summary to allow a reviewer to quickly identify the work.

Every studio has its own specific requirements based on the status of its projects in production and pre-production. Initially, the best thing to do is to contact the recruiting office or Human Resources department of a studio and request information on its application requirements. Follow the guidelines closely. Depending on your skill set (for example, whether you are an animator or a modeler), the requirements for your portfolio pieces will vary. When you have all your artwork and paperwork prepared, submit your application after having reviewed it multiple times—you only get one chance to make a first impression, so it had better be error-free! In some studios, you may also be asked to take a test, when applying for a story artist position, for example. A standardized test is often a fair gauge of judging an artist's aptitude for the project.

Some studios have weekly or monthly artist application reviews and will continue to accept updated portfolios even if there are no current openings. Despite everyone's best intentions, the volume of applicants sometimes makes it impossible for recruiting departments to get back to every applicant in a timely manner. All recruiters would love to be able to acknowledge each candidate personally, but often at the big studios it's just not possible. On a positive note, big studios are generally well organized and will keep reels and résumés on file to review as new positions open up beyond the immediate project's needs.

Production Staff

There are several ways to get into production. Whereas a portfolio is an artist's calling card, a résumé or curriculum vitae (CV) should be used when applying for a production staff position. Make sure to have a strong résumé that emphasizes your abilities

to organize, work with artists, communicate, and multitask. It is important that your résumé is easy to read and can be understood at a glance. It should not be more than two pages long. If you have listed individuals on your résumé as references, it is wise to speak with them in advance to prepare them for a possible call. By doing so, you give your contacts a chance to review your work experience, and hopefully, they will give you a glowing referral when the time comes.

If you have little or no production administration in your background, consider applying as an intern, production assistant, or a producer's assistant. If you attend a community college, you may be able to design a class in which you can get school credit in exchange for doing an internship at a studio. Computer skills are also an important asset. Having a working knowledge of software programs such as FileMaker Pro, Excel, and Photoshop can give you the winning edge by setting you apart from other candidates applying for the same position.

Voice Talent

Most voice-over actors have agents who present their voice clips around the industry and send their clients to auditions. If you don't have an agent, it is important that you assemble a sample of your work that demonstrates your voice range and talent. This sample can be made available through a personal website, public video/audio-posting websites such as youtube.com, or a number of online voice talent banks where you can upload MP3/MP4 files of your work for casting agents and producers to access directly. Whichever approach you choose, be sure that your recording quality is professional.

Potential work may be found by utilizing an agent, staying in touch with studio contacts, and researching opportunities online, as some casting directors and producers post casting calls, especially for nonunion projects, at sites like voices.com, castingnetworks.com, and others.

On larger scale projects, when a voice-over actor is hired, the agent negotiates the deal and helps the actor with all of the contractual paperwork. The agent is then paid a percentage of the actor's negotiated fee. The average voice-over session takes approximately four hours, depending on the role. Pay rates vary based on the type of voice-over work being done, and whether the project is union or nonunion (that is, Screen Actors Guild [SAG] or not). For union work, it is best to contact SAG directly to get the updated minimum rates. For nonunion work, the amount paid is whatever you or your agent can negotiate.

Whether you have an agent or not, it is a good idea to take a voice-over acting class, as doing so will help you hone your skills

and make potential contacts. Many of the voice-over coaches are professional voice-over directors who are looking for fresh talent. (For more information on auditions and casting, see Chapter 8, "Pre-production.")

How do i know whether my project is better suited for traditional 2D, digital 2D, or CG?

The simple answer is that much depends on your resources: your artistic vision, plus the skills and available funds to explore different stylistic options. Each technique has its own pros and cons, yet when you have a strong story, whether the animation is in CG or 2D becomes secondary. Sometimes a concept is based on source material that has a graphic component and you can use that imagery to guide the visual exploration for the project. Other times, you have an original idea and you can make the determination about what kind of animation technique is the best choice by considering its intended target audience and ultimately where it is to be shown. For example, is this an idea that should be a theatrical release? Or can it find a niche audience on the Internet? Or should it be developed as an application for the iPhone? Consider that the production cost for a CG theatrical feature film can run anywhere from $10 million to $175 million and that an outsourced 11-minute digital 2D television show has an average animation cost of $25,000. Depending on your end goal with the property, these kinds of financial ranges will definitely play a role in helping determine your direction.

As you will discover, this book is set up to provide you with specific steps on how to put pitch material together in preparation for taking your idea to the market place and find the right home for it. As it is often the case, once a project is sold, the decision on the style of the show will be open to discussion based on what the buyer considers to be the right choice, while the budget, schedule and marketing consideration also play an integral part in the final decision. (See Chapter 3, "How to Identify and Sell Projects," for more details.)

I have a project. should i set up my own animation studio or find a studio for hire?

One of the dilemmas of independent animation producers is trying to decide whether they should consider setting up a studio of their own instead of hiring an existing one. The short answer is much depends on your specific expertise, your content and the scale of your project. The thinking behind this approach is that all available resources for the project will go directly towards the

making of the product rather than towards the subcontracting studio's producer fees and overhead that may seem extraneous to the actual production costs. Ostensibly, setting up your own production company can provide you with direct control of how the funds are spent; the creative freedom to explore various artistic choices; and finally, the ability to hire your own staff. Yet what this approach does not take into consideration is that running a studio is an entirely different business than producing a film. Setting up a studio from scratch requires a substantial investment (initial startup funding, finding space, office/furniture/equipment rental/hardware/software leasing, pipeline development, hiring of artistic talent and production staff, etc.). As a studio owner, your primary focus will have to shift from how to make your project to how the studio will be run from day to day and how to sustain it. If you are not experienced at this type of business—or even if you are—there are always going to be surprise costs that cannot be anticipated. Ultimately, the film will more than likely cost more money than you budgeted, as building a studio is an expensive proposition.

Unless you have a way to monetize the studio and/or have investors who are willing and able to fund your projects from a long-term standpoint, your resources are probably better utilized by exploring the plethora of existing studios whose expertise will enable you to see a myriad of different stylistic approaches towards your project, which will let you hone in on the best configuration of available talent and creative direction. Instead of learning by trial and error and wasting a substantial amount of time and money learning how to run a studio and create a functional production pipeline, you can focus your efforts on how to successfully produce your project. By hiring a subcontracting studio, you benefit from the expertise of seasoned artistic talent, a tested and functioning pipeline and production processes, and staff members who can execute your project expeditiously and cost effectively. (See Chapter 7, "The Production Team," on how to select the right studio for your project.)

What are the average budget and schedule for an animated show?

It is difficult to say exactly how much a project might cost as there are so many variables that influence budgets. Key items that affect a budget include the project's purchase price; the cost of the key creative talent attached to the property; the type of story being told; the choice of art direction; the style, technique, and complexity of the animation; the format; where the animation is being produced; and the delivery schedule. (For more detailed information on how to budget, see Chapter 6, "The Production Plan.")

On average, the budget range for a theatrically released CG feature film can be as low as $15 million, all the way up to $250 million. Sequel projects that are specifically created for the DVD market can range from $3 to $25 million. A television series, because it varies with the number of episodes produced and the complexity of animation, has a very broad budget range. A low-budget traditional 2D show can start at $250,000 per episode; a more high-end animation prime-time show can reach over $1.5 million per episode.

What is the balance for a boutique animation studio between doing work for hire and creating projects for which they own the intellectual property?

It is typically every studio's dream to invest in intellectual property (IP) and own their own characters. Creating animated characters and producing original product has a much greater potential upside than strictly being in the work-for-hire business. With that said, there is no guarantee that a project will be a "hit," and there is an inherent risk to be considered when creating a studio's business plan with regard to development. There is no right answer, as this decision is a very individual one based on a studio's goals and vision. It is also significantly affected by a company's financial situation and its ability or inability to invest in projects. The other factor is the size of the studio and its capability to juggle multiple projects. When determining your balance, the key thing to remember is that you need to budget the amount you invest in your project in such a way that it does not potentially risk your ability to cover your fixed costs such as overhead and labor. It is also key to be conservative in terms of what exactly you spend money on what your end goal of the item is in helping your project get sold. (See Chapter 5, "The Development Process," for more details.)

What does it mean to have to bond a film project?

Due to the fact that a considerable sum of money is required to produce a theatrical feature film, when such a project is made outside of the established mainstream studio, its financiers/investors need a form of insurance that guarantees the project will be completed and delivered by the producer in accordance with their agreed-upon terms. This insurance is called a *completion bond* or a *completion guarantee* and is offered by a bonding company for a fee, typically a percentage of the overall budget.

When applying for a completion bond, the producer must provide a packet of the following types of materials: the script,

the budget, the schedule, cash flow, the credits of the key talent, and information on the project's investors and their financial commitment to the film. The bonding company in return will scrutinize all of the project's components and evaluate the risk factors involved in the proposed scenario. For example, if the producer and director team have already completed projects of a similar caliber and have a consistent track record of delivering shows on time and on schedule, they present a minimal production risk. If this is not the case, it will be assumed that the risk of delivery is higher and the bonding fees charged will reflect this greater risk. Once the packet is approved for consideration, the bonding company typically sets up meetings with the production's principals in order to further evaluate the project's viability. After the initial assessment has been made, it is not uncommon for the bonding company to request adjustments to the budget and schedule. It is up to the producer to consider their revisions and update his or her packet.

Based on the assessments of the key members of the production team and the final packet, the bonding company will determine whether the film can indeed be completed and delivered to the distribution company as budgeted, scheduled, and staffed by the producer. If the proposal is accepted, the bonding company will draw up the agreement and the producer can access production funding. Once production commences and throughout the process, the bonding company will monitor the project's progress. If there is a concern that the project will not be delivered on budget and or schedule, the bonding company will take over the project and move in to manage it themselves, ensuring that their client's investment is protected.

I have the world's best idea for a feature film! What do I do now?

Well, buying this book is a good first step . . . and then reading it and having a grounded understanding of just how challenging it can be to bring your idea to reality is a wise way to proceed. With thoughtful development, well-executed research into the marketplace, a hearty gathering of talent, savvy networking, and a committed belief in your vision, anything is possible!

2

THE ANIMATION PRODUCER

What Is an Animation Producer?

The Producer's Guild of America defines the role of the producer as follows:

> *A producer initiates, coordinates, supervises and controls, either on his or her own authority [entrepreneur producer] or subject to the authority of an employer [employee producer], all aspects of the motion-picture and/or television production process, including creative, financial, technological and administrative. A producer is involved throughout all phases of production from inception to completion, including coordination, supervision and control of all other talents and crafts, subject to the provisions of their collective bargaining agreements and personal service contracts.*

Although much of this definition is applicable to an animation producer, the scope of responsibility varies based on his or her area of expertise and place of employment. At the major studios, most producers are "employee producers." Under this production structure, the studio's core executive group usually sets up and oversees all projects. They may, for example, hire a producer after a project has been developed and budgeted and is ready to go into production. Often times, an employee producer may not be responsible for all aspects of the production as outlined by the Producer's Guild of America's definition. A producer may not necessarily need to create a budget, but he or she should have the skill required to manage it. In contrast to employee producers, smaller independent studios tend to be headed by the "entrepreneur producers." Due to lack of financial resources, these producers have to wear many hats. As a result, they often have to put together a budget themselves as well as oversee it.

There are multiple titles associated with the producer credit. The most commonly used are: executive producer, producer, co-producer, line producer, and associate producer. Of course, there are many variations to this list, including creative producer, consulting producer, supervising producer, and assistant producer,

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to name a few. Theoretically, titles are based on an individual's background and experience level. In some cases, however, they are based on what an agent or a representative is able to negotiate for his or her clients, wholly independent of their actual ability.

Although there are numerous variations of the producer credit, for the purposes of this book, the job description will be described as one of three basic categories according to the role or function they play on a production. Often times, a producing credit may be based on the format of the show. An example of this approach can be found in the area of credits accorded to television writers. For prime-time series, most staff writers are credited as producer and writer; on a feature, they would be given a writer credit only.

The first type of producer is the "deal-maker." These producers help gather the financial resources and potentially key players, including talent and/or a production studio, for a project. They generally have little or no creative input. Deal-maker producers are usually nonexclusive, meaning that they can work for other studios and have multiple projects in progress. It is highly unlikely that they would focus all their time on a single production. Instead, deal-maker producers hire a line producer to handle the actual production of a show.

The second type of producer is a person who facilitates pulling the entire production together. This "facilitator" producer generally does not draw or write, but has an overall creative understanding of both the drawing and the writing, and therefore has some artistic input. These producers are very hands-on during production, but their involvement in the level of production detail often depends on whom they have working for them. Their main focus tends to be the budget and schedule, with the overall goal of meeting the creative demands of the project.

The third type of producer can be called the "creative" producer. These producers have the ability to draw and/or write, or they have an in-depth knowledge of story development. They are heavily involved in the creative decision-making process. Although they do have responsibility for the budget and schedule, their emphasis is on the creative side. In this configuration, a line producer most often handles time and money management.

The most commonly used producer job titles and their areas of responsibilities are as follows:

Executive Producer

Typically, *executive producers* oversee the entire project from start to finish from both a creative and operational point of view. They oversee the hiring of key creative staff (that is, producers, the director, and writers). They are also involved in

script development and the visual development of the show. Additionally, they give notes and input throughout the course of production. On the production side, they usually have input into and sign off on the project's production plan, including the budget and schedule. It is important to keep in mind that the role of these producers, in most cases, is defined by the individual's expertise, his or her background, and the format in which the project is being produced.

On feature projects, an executive producer tends to fall into the deal-maker category. This type of producer is probably not exclusive to the project, but he or she would have input in key areas negotiated up front. The executive producer monitors the progress of production to guide it toward its timely delivery. In episodic television, the executive producer is usually considered the "showrunner" or creative visionary behind a production. Therefore, they would most often fall into the creative producer category. The television executive producer is involved in all stages of development, including the creation of the bible (that is, the design of main characters and overall art direction; see Chapter 5, "The Development Process," for more information on this topic). Once production begins, everything crosses the executive producer's desk so that he or she can review materials and give notes to ensure that the project remains in line with the overall vision. These materials include pre-production elements such as the script, artwork, and storyboards (see Chapter 8, "Pre-production," for more information); production materials, including animation tests and color (see Chapter 9, "Production," for more information); and post-production, where they are involved in editing as well as audio and video sessions (see Chapter 10, "Post-production"). As the main point person for the buyer (who is either funding the production or is representing the individual/entity who is providing the funds), the executive producers are often the individuals who receive creative and legal notes to be implemented. They usually have input on marketing, air schedules, and viewing order, and are ultimately responsible for delivering the project on schedule and at the agreed-upon level of quality.

Producer

The most common type of animation producer best fits under the category of the "facilitator." This job entails creating a budget, developing a schedule, and putting all of the production crew and/or subcontracting studios and post-production team and facilities in place. The objective for this producer is to plan and structure the number of staff needed, hire the staff, and determine their start and finish dates. The facilitator producer has creative input in every phase of production along with the director.

Their goal is to shepherd the project from its conception stage through final delivery, on budget and on schedule.

At some larger studios, this type of producer may also fall into the "creative producer" category, whereby he or she would play the dual role of producer and director. In this case, the studio's executives would be much more hands-on in helping to monitor the production's budget and schedule, and in doing deals with subcontractors, talent, crew, and outside facilities.

Line Producer or Co-Producer

The chief responsibility for the *line producer* or *co-producer* (hereafter referred to as the line producer) is establishing and managing the production budget and schedule. The line producer's role is very similar to that of the facilitator producer, but the line producer has very little or no creative input on production. Often this individual is hired when the production is either recently greenlit or is close to approval. Line producers are held accountable for making sure that the production goals are met within the budget and timeline.

It should be noted that the title of co-producer is at times given to a person who is simply attached to the project and may be involved only in the conceptual or initial deal-making phases.

Associate Producer

The role of *associate producer* is one step above the production manager. Associate producers tend to have a more in-depth production background than production managers, yet they do not have the level of experience to be given the title of line producer.

Similar to the role of the line producer, this job is strictly administrative. Using the budget and the schedule as a guideline, the associate producer works closely with the production manager in coordinating and tracking the flow of artwork from one department to the next during pre-production. When subcontractors are used on a production, the associate producer is often in charge of overseeing the shipment of material to them. The associate producer may or may not be involved in post-production. Operating as a facilitator, the associate producer's degree of control and decision making is contingent on the structure of the studio and/or production. Generally, these producers are not in a position to make deals with outside facilities or subcontractors on their own. They would, however, probably be able to hire members of the production and artistic team based on the director's input.

On a feature, the producer delegates the detailed management of the production to the associate producer. With the aid of the production manager, the associate producer is in charge

of coordinating the efforts of potentially 250 or more crew members. Constructing an efficient production pipeline starts with an approved script. However, on a feature production, the script develops and changes through most of the production, so the only way to proceed is to peel away one sequence at a time. As each sequence is completed through the storyboarding and/or pre-visualization process, the associate producer evaluates its complexity or how difficult it is to create the artwork. Through close collaboration with staff members such as the director, the visual effects supervisor, and the production accountant, the associate producer estimates the number of hours or cost of each sequence. If the dollar amount is acceptable, the sequence can go into production. When it exceeds the allotted budget, the associate producer's edict is to come up with alternative cost-cutting options. In order to keep the project on schedule and avoid unexpected overages, the associate producer will judiciously gauge the complexity level of every shot throughout the production. Commonly, the associate producer's duties start with pre-production and continue through the delivery of the final color images. He or she typically has little or no involvement in either the development or post-production phases.

Producer's Responsibilities

The responsibilities of the producer at each studio depend on a number of factors:

- The format/length of the project
- The technique and/or process of animation
- The organization of the studio
- The producer's experience and expertise

Based on these criteria, the producer may take on all or a combination of the areas listed here. Please note that when it is indicated that the producer needs to "obtain approval" on specific line items, this phrase refers to getting final approval from the individual(s) responsible for overseeing and or funding the project (buyer/executive).

1. Manage creative vision and oversight of the project.
2. Create and obtain approval of a production plan including budget, schedule, and list of assumptions.
3. Finalize the script for production.
4. Identify and select the director(s).
5. Establish creative checkpoints with buyer/executive. (See Chapter 9, "Production," for a detailed list.)
6. Cast and hire the artistic team. (See Chapter 7, "The Production Team," for more information.)
7. Cast and hire the administration and production staff, including the line producer, co-producer, associate producer, and production manager, if applicable.

8. Identify and select subcontract production studios, if applicable. (See Chapter 7, "The Production Team," for more information.)
9. Negotiate deals with subcontract studios and outside facilities. (See Chapter 7, "The Production Team," for more information.)
10. Cast the composer.
11. Complete and attain approval on key pre-production artwork. (See Chapter 8,"Pre-Production," for more information.)
12. Conduct an ongoing evaluation of production output and department quotas.
13. Supervise staff and monitor the day-to-day progress of production.
14. Communicate the overall production priorities to crewmembers.
15. Establish and maintain relationships with all pertinent ancillary groups, including licensing and merchandising, online, publicity, distribution, and promotions.
16. Resolve disputes and conflicts within the production unit and all outside services.
17. View and approve all animation. (See Chapter 9, "Production," for more information.)
18. Approve retakes and revisions.
19. View and approve the director's cut.
20. Attain and approve the final cut.
21. Supervise the "spotting" of sound effects and music with the director.
22. Supervise and approve automatic dialogue replacement (ADR) and additional sound effects with the director.
23. Supervise the music recording session with the director.
24. Supervise the final mix session with the director.
25. Obtain approval of the content of the opening titles and end credits as well as title design and opticals.
26. Obtain approval of the final output.
27. Deliver the final product in the format requested by the buyer/executive.

The Makings of the Ideal Producer

The animation producer is the central person around whom a production flows. When a production is running smoothly, people often wonder what a producer actually does. In an ideal scenario, the animation has not only surpassed the creative goals, but also is on budget and on schedule. In this case, the producer has done a good job and has thought through all areas of the process. How is this ideal state achieved? It starts with a producer who is knowledgeable about the process of animation. He or she is comfortable asking questions and eager to learn more. Such producers know how

to cast the right people, to delegate, and to trust their staff's expertise. They are able to anticipate problems before they happen and are able to communicate their needs effectively. They always know the status of the production and can seamlessly make changes when small problems arise. On the other hand, when a production is in trouble, the producer is the first person to be identified as the responsible party. If the producer can't figure out how to make the production work, his or her job may quickly be put on the line.

The following describes the many roles played by the "ideal producer."

Leader

Although each producer brings his or her own individual skills to the table, there are fundamental qualities necessary to all producers. One vital quality for any "good" producer is the ability to lead and inspire. He or she should be able to draw out the best from the director and the team and do all that is possible to facilitate the creative vision for the project. As the primary individual responsible for hiring the cast and crew, each employee looks to the producer for guidance and answers. Standing at the apex of the production pyramid, the producer literally sets the tone for how a production is run. If the producer is organized, punctual, capable of juggling many tasks at the same time, and fulfills his or her commitments, then the crew will very likely attempt to emulate their leader.

Communicator

Strong, clear communication skills are also necessary for a producer. From the start, the producer needs to communicate the project's overall creative objectives and timeline to the crew in order for them to understand their common goal. Keeping the staff informed of the status of the production is also a priority. Clear and timely dissemination of notes and changes related to resetting priorities is key to staying on track. It is not important for each member of the team to know every detail, but weekly or daily meetings for key staff—and perhaps monthly or quarterly meetings for the entire crew—will help keep the staff enthusiastic about the production.

A good producer understands that communication goes both ways, so he or she must also be a good listener. It is a never-ending challenge for the producer to function as the team's supervisor but at the same time remain approachable so that all members are comfortable to share their thoughts and opinions.

Nurturer of Creativity

Maintaining a creatively fertile environment as the project goes through rewrites and revisions is another significant function of the producer. At times, artists may become frustrated by the

production as they see their work deleted again and again due to story changes. They may feel alienated because they are not able to see how their work fits into the larger picture. Again, it is up to the producer to communicate the big picture and explain why the changes are necessary and how the additional work will improve the end product. Chances are that the producer is equally dismayed by the changes, yet presenting a positive attitude and remaining optimistic toward the project motivates the artists to continue to do their best work.

Innovator

Although it is impossible to anticipate every hurdle that a production may encounter, the producer must be prepared for the unexpected. Thinking through every step in advance enables the producer to alter the schedule and budget as necessary, without halting the flow of production. In response to the inevitable production problems, the producer must be proactive and come up with creative solutions. This is where it is advantageous for the producer to have hired team members that work well under pressure and together can forge new paths in production.

Delegator

Producing animation effectively requires an individual who can pay attention to detail without losing sight of the larger picture. Delegating duties to other staff members, and knowing when to follow up instead of attempting to micromanage every detail, enables the producer to function successfully. On productions with a large production staff, it is important to set up a robust, flexible, web-based tracking system, not only as a production management tool, but also so that the producer can have full access to information regarding all areas of the production at any time. (See Chapter 11, “Tracking Production,” for more information.)

Energizer

Another critical attribute for a producer is the ability to understand, respect, and carefully pace the creative process. In essence, the producer energizes the project, which is especially the case in animated projects, because the process is slow and it is easy for crewmembers to get drained. It is up to the producer to decide when it is time to push and meet or exceed the weekly quotas and when it is appropriate to be flexible. On projects that are behind schedule, the staff may be required to work late and on weekends as the deadline gets closer. Although getting paid overtime is always attractive, being separated from one’s family is not. The producer has to work extra hard to make the crew feel appreciated and suitably rewarded for their efforts.

Decision Maker

A producer also has to be capable of making both popular and—more important—unpopular or tough decisions. Although this is not easy, the producer's job is to keep the best interests of the project in mind at all times. An example of such an action may be deleting characters or story details from a project. Artists become very attached to their work; to see a big chunk of it get thrown out is never palatable. Thus, the producer needs to convey his or her respect for the work that was done while clearly explaining the reasons behind such decisions.

An even more personal and delicate situation might involve firing an underperforming employee. A fair producer should give the employee constructive feedback, warnings, and ample opportunity to do better. If there is no improvement, however, the producer will need to make a tough decision. Making the choice to fire an employee sends a message to the rest of the crew that their performance matters. Under these circumstances, the producer's best approach is to try to make the transition as easy as possible through communication and by keeping the crew aware of the upcoming change at the appropriate time. Although the actual details of a dismissal must remain confidential, the producer should be sensitive to the staff, as they may feel vulnerable and think their jobs are also in jeopardy. It is imperative to actively do damage control. By having an open-door policy and encouraging discussions, the producer can avoid paranoia and stop rumors from spreading around the studio, wasting valuable production time.

Ambassador

Besides having to wear many hats within the production hierarchy, the producer must also serve to represent the project to the outside world. Meeting the buyer's/executive's needs has to be a top priority for every producer. At the same time, a completed project can be killed with poor marketing or ill-conceived promotional campaigns. Therefore, the producer will need to interact closely with the ancillary groups such as publicity and merchandising, getting them "on board" with the project as early as possible and keeping them enthusiastic about it so that they are invested in its success. Providing these outside partners with artwork and other production material in a timely manner is critical to maintaining a successful relationship.

What Makes a Good Animation Producer?

We contacted industry professionals in all areas of the field to ask them what they look for in a good producer. We spoke

to studio heads, producers, directors, artists, and members of production teams to get a well-rounded point of view on this question. The multifaceted nature of the role of the producer is evident from the variety of responses we received.

We consider ourselves very fortunate to have been able to gain insights from the individuals who are quoted and who share their experiences in the following section. For each quote, we have listed the person's name as well as an abbreviated credits of his or her career to provide context for their perspective from within the entertainment and/or animation business. The section begins with thoughts from studio heads and executives responsible for hiring producers. We include quotes from producers next, with comments on how they themselves view their role. Following the producers, we have included quotes from creative staff such as directors and writers who collaborate with producers to develop projects. Finally, we have presented quotes from artistic and production crewmembers, arranged in the order of the production pipeline. (Please note that we collected these quotes between February 2010 and January 2011. Thus, the credits and titles listed for each person reflect this time period.)

Roy E. Disney

Former Chairman of Walt Disney Feature Animation; Executive Producer, Fantasia 2000 *and the Oscar®-nominated shorts* Destino *and* Lorenzo *(Walt Disney Feature Animation)*

I think the most important attribute of being an animation producer (or anything else for that matter) is *patience*. Everything in the process takes time—almost always longer than you expect it to—and the ability to wait it out, to keep hold of your original vision, to work with a wide variety of people, and to settle only for what is the *best* is paramount. It will always be harder than you think, and take longer, too, so be patient!

Chris Meledandri

Founder/President of Illumination Entertainment; Producer, Despicable Me *(Illumination Entertainment); Founding President of 20th Century Fox Animation; oversaw or executive produced movies including* Ice Age, Ice Age: The Meltdown, Robots, Alvin and the Chipmunks, The Simpsons Movie, *and* Dr. Seuss' Horton Hears a Who!

Producing requires an equal command of storytelling, production, and marketing. A great producer creates an

environment in which the director(s) can do their best work. This starts with assembling the right combination of artists and production personnel to complement the skills, talents, and experience of that director. Once the team has been hand-selected, the producer should become a chameleon and define his or her own role in response to the specific demands of that particular production. Staying one half-step removed from the hour-to-hour creative process gives the producers perspective and allows them to be aware of the movie as a whole while the team builds each frame with great specificity. Producing a film is a constant balancing act of assessing story, monitoring production, and—most important—managing the great number of people that come together to make movies.

Bob Osher

President, Sony Pictures Digital Productions; Chief Operating Officer, Columbia Pictures Motion Picture Group

Great animation producers keep energetic, talented minds on track. They appreciate the logistics that accompany complex production, while maintaining the joyful spirit that making animated movies is all about.

Andrew Millstein

Executive Vice President and General Manager, Walt Disney Animation Studios and Disney Toon Studios

A great animation producer is one who can inspire, support, and collaborate with all of the directors, actors, artists, technologists, and studio executives who make our projects successful. They must do this over the course of several years, keep their projects on schedule and on budget, and maintain their good humor in the process. It's not a job—it's a passion.

Pam Marsden

Senior Vice President, Sony Pictures Animation; Producer, Cloudy with a Chance of Meatballs *(Sony Pictures Animation); Producer,* Dinosaur, Mickey's Twice Upon a Christmas *(Walt Disney Feature Animation)*

A good animation producer needs to have good sea legs and an uncanny ability to prioritize, reprioritize and then adapt even more. He or she must realize that animation is a marathon (not a sprint) and must keep the big picture in mind, finding ways to continually move the process forward towards short term and

ultimate goals. A really good animation producer can do all of this while keeping a sense of humor in the face of challenges over a long, long time.

Sandrine Nguyen

Chief Executive Officer/Executive Producer, OuiDO! Entertainment; Co-founder/Chief Operating Officer, Attitude Studio; Producer, Rock The Boat: The Almost True Story of Noah's Ark, Scary Larry, Fish 'n' Chips, Monk, Bugged *(OuiDO! Entertainment)*

A good animation producer is like a gifted conductor. He or she needs to constantly orchestrate and find the right balance between the creative and financial issues. But more than that, being an animation producer is about having the ability to gather, motivate, organize, and harmonize one team around one very single goal: the movie in itself. The producer also has to have the ability to listen, arbitrate, and decide, meanwhile pushing each and everyone to have initiative and give the best of themselves. It's also about being able to pull together a significant amount of talent along with juggling dozens of different tasks while having a global eye on the production and ensuring that the quality objectives are met despite all the constraints to be overcome.

Max Howard

Owner, Max Howard Consulting Group; Producer, Igor *(Exodus Film Group); Co-producer,* Spirit, Stallion of the Cimarron *(DreamWorks Animation); Producer, Exodus Film Group; Previous President, Warner Bros. Feature Animation, and Senior Vice President, Walt Disney Feature Animation*

A good producer brings perspective to the project and maintains that perspective by balancing the artistic vision with the time and money allotted. If you can do that, then you have succeeded.

Rob Hudnut

Vice President of Entertainment Development, Mattel

A great animation producer is like Magic Johnson: he (or she) makes everyone on the team better. He gives his teammates the organizational foundation and tools they need to do their best work. He keeps morale high by giving his best work and expecting it from others, which makes everyone proud of what they're creating together. He understands that the client's success is his

own, and he models a passion for making every aspect of the project as high-quality as it can be. If surprises happen, he stays calm, positive, and creative. There is no one more important to the success of the team!

Jay Fukuto

Head of Studio, Film Roman; Executive Producer, Wow! Wow! Wubbzy! *(Film Roman); Animation Executive Producer,* King of the Hill *(Film Roman)*

My definition of a really good producer is someone who is a terrific problem solver while maintaining a calm and confident attitude. Say you a have tight deadline to meet and suddenly the building is on fire, there is a union strike, half of your staff is sick, and your workstations all have computer viruses. The best producer will look at you unflinchingly and say, "We'll meet the deadline." I love that person!

Chris Pyrnoski

Co-founder, Titmouse, Inc.; Creator, Producer/Director, television, commercials, cinematics, and features including Freaknik: The Musical, Motorcity, Metalocalypse, Beavis and Butt-head, Guitar Hero, Megas XLR, The Osbournes, Avatar, Afro Samurai

If you happen to be working on a gig and the inevitable deadline is coming up and you've got a big stack of work on your desk and the voice inside your head is saying, "Man, I really don't want to let my producer down!" then that producer has the special magic sauce. It's the perfect combination that your favorite teacher and that cool camp counselor and your football coach have in common. I like to call it "wisdompowerinspirationguiltjuice." Okay, I don't actually call it that. It's a quality that's impossible to name. Motivation from the heart is the radioactive spider that gives the producer superpowers. I think it stems from really *loving* the job. You can tell when any person loves what they do. This applies to producers the most! Dig it: a producer should want to "produce," not negate or block the mojo that flows from an artist's pencil. The best producers are so down that they become a kind of fancy cheerleader. They can channel your energy and push you to do the kind of work they know is inside of you! And then—hot damn! You've got an awesome cartoon on the TV set or on a big old moving picture screen—and if the crew is at the wrap party pouring a cooler of Gatorade all over the producer's head, then you know that cat did it with style and then some. Excelsi-mother-freaking-or!

Tim Miller

Co-founder, Creative Director, Blur Studio, Inc.; Cinematics for Star Wars: The Old Republic, Star Wars: The Force Unleashed, DC Universe Online, Dante's Inferno, Brink, Fable 2 & 3, Batman: Arkham City, Bioshock's *1, 2,* and *3,* Dragon Age, EverQuest, Halo Wars, Hellgate, Warhammer, Marvel Universe Online, Wolverine, *and* Rise of Legends, *to name just a few. Numerous commercials and films including* Avatar *and* Scott Pilgrim vs. the World.

I like to see some courses in hostage negotiation on a producer's résumé: "Put down the checkbook and step away from the project—*no sudden movements*!" It takes that kind of fiduciary skill to get the vital funds for the creatives to do their job properly. The producer needs a certain flair for finding the motivational hook that will make clients feel *good* about the process, looking beyond the checkbook concerns.

Sorting out the dollars and cents is really just a prerequisite though. In my book, the *real* skill of a great producer is knowing how to pick your battles and *understanding* what's *really* important in any creative endeavor. It doesn't matter that it's on budget if it sucks. A producer who knows the difference between what we want and what we *need* can serve all major goals—creative, budget, schedule, and keeping the team happy and motivated—equally. We expect that from a good producer.

David Sproxton

Co-founder and Managing Director, Aardman Animations; Producer, Chicken Run *(Aardman Animations); Executive Producer,* A Close Shave, The Wrong Trousers *(Aardman Animations)*

A good producer is one who anticipates and plans, protects both the creative vision and the artists, and delivers on time and on budget. They also need to be excellent plate-spinners, fire-eaters, and circus ringmasters, with an inherent ability to herd cats.

Robert Taylor

President, Pendulum Studios; Executive Producer, Tron 2: Evolution *(game cinematics), Disney Interactive/Propaganda Games/ Pendulum (Pendulum Studios); Co-director/Executive Producer,* Iron Man 2 *(game cinematics/trailers), Marvel Studios/SEGA/ Pendulum and* Silent Hill V: Homecoming *(game cinematics/ trailers), Konami/Collective/Pendulum (Pendulum Studios)*

A producer is tasked with threading a bullet train through a pinhole while juggling flaming swords blindfolded. To do so, they

must effectively balance the roles of innovative storyteller, strict taskmaster, austere accountant, meticulous technician, compassionate psychologist, consenting scapegoat, clever negotiator, devoted friend, manipulative manager, pragmatic executive, creative facilitator, and talented magician. They must be tireless problem solvers who are able to evaluate complex situations, break them down into their component parts, allocate appropriate resources, delegate unpopular responsibilities, mitigate potential risks, keep stakeholders informed (just enough), and be willing to shepherd a long tough project through to completion. Because this is an almost impossible job description—or at least, a fairly ridiculous one—you'll often find that the best producers are armed with a potent sense of humor and/or a pervasive thirst for wine.

Kim Dent Wilder

Senior Vice President, Production and Operations, Rainmaker Entertainment

A good animation producer is someone who can find the right balance between creativity and reality and still keep smiling!

Brad Booker

Development Executive/Producer, El Matador (Reel FX Entertainment); Senior Character Animator, The Lord of The Rings: The Two Towers *(WETA Digital); Character Animator,* The Iron Giant *(Warner Bros. Feature Animation)*

The Producer: one who wears many hats. Shock absorber, creative protector, budget guardian, conduit, communicator, psychologist, impartial mediator, leader, battle strategist, drill sergeant, enabler, enforcer.

Being a good producer means often riding a fine line and always searching for ways to work smarter rather than harder. It means protecting the creative while being fiscally responsible. A good producer must know when to fight and when to trade their boxing gloves for white velvet gloves. A good producer knows that no one can win every battle and must be a master at choosing his or her own. A good producer is a skilled collaborator and master in compromise. A good producer is a person that can kick your ass when needed but be your best friend right afterward. Most of all, a good producer must be passionate, recognize talent, figure out a way to harness it, protect it, and facilitate the best movie they can with the time, money, and resources at their disposal.

Jeff Pryor

President/Founder, Priority PR; Clients have included: Sesame Street, Mighty Morphin Power Rangers, Maisy, The Pink Panther, X-Men, *and* Madeline

From a marketing and publicity standpoint, good animation producers know that the earlier they bring in the marketing and publicity team on a project, the more opportunities there will be to create media exposure and garner consumer interest. The truly great animation producers give us access and information from the very first meeting so that we can then build momentum throughout the duration of the project—through development, production, release, and even licensing and home entertainment sales. They see the big picture, know every nuance of the project, and are able to articulate the value of early and frequent communication to the entire production team so that we, in turn, can cover all the bases by promoting every aspect of their animation project. With the advent of social media and its powerful reach, it has become more efficient to use these tools to build a fan base for a production, giving producers a solid foundation to grow the property to become even more successful.

Melissa Cobb

Producer, Kung Fu Panda *and* Kung Fu Panda 2 *(DreamWorks Animation)*

An animation producer must have a passion for the art of animation, a love of problem solving, and a great deal of patience. But, perhaps most importantly, a producer must trust the rather messy creative process that is animation. The path one travels on these films is rarely straight and never well defined. The road has many potholes, dead ends, and unexpected turns along the way. If one does not truly believe that these roadside hazards are essential to finding the best film, it is nearly impossible to lead hundreds of people along it with confidence and conviction.

Roy Conli

Producer, Tangled *and* Treasure Planet *(Walt Disney Animation Studios); Co-producer,* The Hunchback of Notre Dame *(Walt Disney Feature Animation)*

As an animation producer, my job is to create a safe playground for artists and managers alike: a creative environment in which success and failure are celebrated as part of the process.

It all works when everyone is aware of goals, communicating openly, and having fun.

Jackie Cockle

Creator/Producer/Supervising Director, Timmy Time *(Aardman Animations); Producer/Director,* Bob the Builder *(HOT Animation Production); Producer,* Pingu *(HOT Animation Production)*

A good creative producer is one who has the creative vision of the project in their head and in their heart. One who can pick a great team and work with them to successfully realize that vision to the very best of their abilities, whilst bringing the project in on time and on budget. They also need to bring out the very best in people and make it a fun and rewarding experience for every member of that team.

Deven LeTendre

Producer, Ivan Toad *(D & D Pictures); Production Executive,* Merry Madagascar *(DreamWorks Animation); Production Manager,* Bee Movie *(DreamWorks Animation)*

A good animation producer has a deep appreciation and admiration for the artists—from directors, animators, and the entire front end all the way to the last lighter and paint fix artist. Animation is a group effort from day one, and being able to effectively motivate and communicate with the entire team is key throughout the entire process; a good producer realizes that this task is achieved only through genuine respect for all members of the team, both artistic and production.

Dan Chuba

Producer, Garfield's Pet Force *and* Garfield Gets Real *(The Animation Picture Company); VFX Producer,* Romeo & Juliet *(Hammerhead Productions)*

A good producer articulates what a project "is," both creatively and as a business model, in such a way that it: (1) attracts financing and distribution, (2) allows the crew to maximize their efforts during production, and (3) focuses the efforts of marketing and sales.

A great producer does all of the above while still balancing the creative needs of the film with the financial reality of the business model. These unique specimens possess the political acumen to convince everyone to go along with a thousand small adjustments, yet still ensure that none of these adjustments compromise the overall impact of the film.

Lisa M. Poole

Producer, Duncan Studios; Associate Producer, Lilo & Stitch *(Walt Disney Feature Animation); Production Manager,* Mulan *(Walt Disney Feature Animation)*

A good producer is one who understands both the director's vision for the film and the fiscal boundaries of getting it made. He or she will defend the director's vision to executives, yet can also have a difficult conversation with the director when compromises, which are inevitable, become necessary. In addition to being a great team builder, a good producer understands the production process, empowers the crew, sets priorities, and keeps everyone focused on the common goal. He or she shares pertinent information about the production while shielding the director and crew from the buffeting storm of studio politics and/or financial wrangling. A good producer is equal parts creative collaborator, political, parent, salesman, mediator, and cheerleader.

Kevin Richardson

Senior Producer, Nickelodeon Kids and Family Games Group

My favorite definition of a producer is that they are the one who you throw out the window if the production is either late, over budget, or bad. To keep that job, you need to have amazing people skills, unwavering vision, high standards, and be driven by results and willing to improvise on a moment's notice. And mostly, have passion for the material. The audience has to be at the center of all decisions. And I would say that being stubborn about quality and deadlines does not mean being a jerk to work with.

Brad Bird

Director/Writer, Ratatouille, The Incredibles, Jack-Jack Attack *(Pixar Animation Studios); Director and Co-writer,* The Iron Giant *(Warner Bros. Feature Animation)*

Simply put, a good producer protects the vision of the director while respecting the limits of time and money. He or she must be willing to fight for the best interests of the film, with the studio if need be, from the moment pre-production starts all the way through the film's release and initial runs. There are so many ways to screw up a movie, and the best producers are those who can anticipate problems yet not panic when the inevitable surprises occur. The best producers walk the tightrope between art and commerce, understanding that ultimately the best show is the best business.

John Musker

Director/Co-writer, The Princess and the Frog, Treasure Planet, Hercules, Aladdin, The Little Mermaid, The Great Mouse Detective *(Walt Disney Animation Studios); Co-producer,* The Little Mermaid *(Walt Disney Feature Animation)*

From my perspective as an animation director, what makes a good animation producer? He or she is many things. He may be a she. Or vice versa. And from this point on I'll make him a "he" to save typing. He must have the tenacity of a bull terrier to help the director marshal the personnel and budget needed in the face of competing projects. He must have the calm of a monk, the sagacity of a sage, and the charm to convince the executives and the director they're both getting what they want. He must resist the urge to shriek in a frenzied panic no matter how reasonable it may seem. In our particular case, with two directors, he must at times—when opinions differ—become a Solomon-like judge who can dispassionately examine the options, carefully weigh the arguments, and then side with me.

Above all, I like a producer who can roll with a fluid development (and even *production*) process. Also one who knows that far more important than the spreadsheets is the real movie as it is being made. It is indispensable to the making of a good film to have a steady, honest hand, heart, mind, and eye in the person of the producer. He can even be a cold splash of water gently but carefully thrown on the overheated director when necessary. And finally, he'd better have a sense of humor. He'll never make it through otherwise.

Henry Selick

Director, Coraline *(LAIKA Entertainment),* The Nightmare Before Christmas, *and* James and the Giant Peach *(Skellington Productions)*

It takes a bunch of skills to produce an animated feature, but none of those skills matter if you neglect this essential fact: your crew is your most valuable resource. A good animation producer knows how to *take good care of the crew*. It can be very challenging to keep a bunch of artists happy (enough) and healthy for two or three years on one show. Some things to consider:

- Create a collaborative culture in which all artists know that they and their work count.
- Supply the usual perks and parties, but don't cheap out with crap food and drinks. Also offer some unusual activities—consider bowling nights, ping-pong tournaments, movement classes, picnics, yoga, massage, dance class, and so on.
- Realize that no one has a longer production schedule than an animated feature. You absolutely cannot start grinding the crew down too early or your cause will be lost.

- Don't let some charming animator weasel a better deal out of you than others of equal talent got. They all compare, and all but the charmer will be really angry.

Perhaps the most important part of all this: you need to have a sense of humor. You simply cannot be serious about everything all the time. Yeah, it costs real money to make a movie and there are real deadlines to hit, but making an animated feature is not life and death: it's a rare privilege that can entertain millions if it all works out, and your best shot at having it all work out is to take care of your crew. (Oh, and having a good script helps, too.)

Jen Yuh Nelson

Director, Kung Fu Panda 2 *(DreamWorks Animation) and* Spawn*, the animated series (Home Box Office Original); Head of Story,* Kung Fu Panda *(DreamWorks Animation)*

A great producer is a deeply clever scholar of human nature. They can rummage around in your head to find the blocks to your creativity, then by making fine adjustments, push you to do things you never thought yourself capable of doing. And the very best producers can do this so stealthily that they deserve ninja credentials.

Stephan Franck

Director/Writer, Futuropolis *(Sony Pictures Animation); Series Creator,* Corneil & Bernie *(Millimages/BBC); Supervising Animator,* The Iron Giant *(Warner Bros. Feature Animation)*

A great producer is a partner in crime. They hustle shamelessly; throw grenades; take bullets; and beg, borrow, and steal for you. They manage up, cajole down, work the system, and get everyone to move away from their fear. They know when to tell the truth and when to handle someone—you included—and most importantly, they'll never utter the words, "Let's all sit down in a room together and figure this thing out!"

Brian Sheesley

Supervising Producer/Supervising Director/Director, Dan Vs. *(Film Roman); Supervising Director/Animation Director,* Camp Lazlo *(Cartoon Network); Director,* Fanboy and Chum Chum *(Frederator Incorporated/Nickelodeon Animation Studios),* Futurama *(20th Century Fox Television/Rough Draft Studios),* King of the Hill *(Deedle-Dee Productions/Film Roman), and* The Critic *(Columbia Pictures Television/Film Roman)*

A good animation producer is:

- Supportive (between the director's creative vision and the limits of time and money)
- Active (in all aspects of a daily routine between artists and production teams)
- Responsible (for the good and the bad that happen during the project)
- Communicative (being able to "listen" as well as speak)
- Attitudinal (a good one that is both funny and sensitive)
- Strong (mentally, with all the various types of executives and artists they deal with)
- Motivating (a positive leader that keeps the crew focused and moving forward)

What does that spell? SARCASM (it helps if the producer is a *Three Stooges* fan).

Laugh and smile every day—we get to work in animation.

Tomm Moore

Director/Co-producer, The Secret of Kells *(Cartoon Saloon)*

My ideal producer? Someone with a cool head even in the midst of artistic or economic storms. Someone who makes the director feel that everything is under control. Someone who understands the animation process well enough to recognize a useful innovation that might diverge from the usual way of doing things. Someone who knows when to listen to the crew and who is humble enough to admit when they don't understand something.

Stevie Wermers

Co-director, Disney's Prep and Landing, The Ballad of Nessie, *and* How to Hook up Your Home Theater *(Walt Disney Animation Studios); Story Artist,* Brother Bear, The Emperor's New Groove, Fantasia 2000, Tarzan *(Walt Disney Feature Animation)*

What makes a good animation producer is someone who is a cheerleader for the team. Someone who for the most part stays out of the creative except when asked to participate by giving more objective, honest opinions. Someone who will fight to get the resources you need. And, of course, bringing in tea cakes every now and then doesn't hurt!

Fabrice O. Joubert

Writer/Director, French Roast *(Bibo Films); Animation Director,* A Monster in Paris *(Bibo Films) and* Despicable Me *(Illumination Entertainment); Supervising Animator,* Flushed Away, Shark Tale, Sinbad: Legend of the Seven Seas *(DreamWorks Animation)*

In the animation industry, the biggest challenge for a producer is having to deal constantly with the paradoxical task of combining art and productivity. It takes such a long time to make an animated

film: it's crucial to ensure that the "assembly line" is never broken and that communication among the different departments is maintained all along. It's about keeping the crew motivated and creating an environment that will allow the director and the artists to give their best to fulfill the vision of the movie.

Mike Nguyen

Director, My Little World *(July Films); Supervising Animator,* The Iron Giant *(Warner Bros. Feature Animation); Animation Supervisor,* Curious George *(July Films for Universal Pictures)*

A good producer must have a clear understanding of the objectives for the film, finding a fine balance between artistic integrity, quality, and commercial appeal within the budget at hand. He or she should be very charismatic, be pragmatic, be inventive at problem solving, excel at communication skills, be easy to approach, and most of all, have the ability to generate harmony and inspire the production team to greatness!

Andre Clavel

Director, Roughnecks: The Starship Troopers Chronicles *(Sony/Columbia/Tristar); Creative Producer,* Asterix and the Vikings *(M6 Studio); Layout Artist,* The Rescuers Down Under *(Walt Disney Feature Animation)*

The ideal (independent) producer has:

- A solid network of relations to fund the project
- The vision to pick a quality script that carries forward a worthwhile message and offers some possibility of doing well
- The intelligence for putting together the best team possible to develop and produce the project
- The strength of keeping that team on track and encouraging them along the long road ahead while keeping the original vision alive

But mostly, the courage to allow this team do the job for which he or she has hired them without constant interference, for Pete's sake!

Dave Reynolds

Writer, Toy Story 2, Toy Story 3, *and* Finding Nemo *(Pixar Animation Studios),* The Emperor's New Groove *(Walt Disney Feature Animation)*

Having a good producer in animation is like having the greatest sherpa going up Mt. Everest. In fact, a producer once carried me up three flights of stairs after a particularly grueling

screening. Little did I know that as he nursed me back to health, he had also given me two pages of detailed notes on the second act. Now that's a great producer.

Kathy Altieri

Production Designer, How to Train Your Dragon, Over the Hedge, *and* Spirit: Stallion of the Cimarron *(DreamWorks Animation); Art Director,* The Prince of Egypt *(DreamWorks Animation); Background Artist,* The Lion King, Aladdin, *and* The Little Mermaid *(Walt Disney Feature Animation)*

The best animation producers I've worked with have warmth, a good head on their shoulders, and a spine of steel. Not only are they familiar with the animation process, but they trust the people they work with and let them do their job. They are good mothers (nurturing, protective) and fathers (they have high expectations and will let you know when you're out of line). They know story. They are not easily intimidated. They have guts: guts to stand up to the studio executives; guts to change creative leadership when the story isn't coming together; guts to allow a film to be made that has ingenuity, vision, and an original voice. They also have the guts to not meddle in every artistic decision made, but to keep their vision high and pure.

Justin Thompson

Production Designer, Cloudy with a Chance of Meatballs *(Sony Pictures Animation); Background Design Supervisor,* Star Wars: The Clone Wars *(LucasFilm Animation); Key Background Design,* The Powerpuff Girls: The Movie *(Cartoon Network)*

The thing that has always made the biggest difference, throughout all my production experience, are people that truly love and respect the work that goes into making these films: producers who are not just interested in running a tight ship, but who are also fans and students of animation as an art form. There are those producers who know the names of all the great artists and understand the lineage of our industry as well as any seasoned animator. They come from different backgrounds: some started as production assistants who worked their way through the ranks alongside artists—getting a firsthand look at every stage of production, getting to handle artwork, becoming familiar with the strengths and flaws of our industry while growing to love and respect the idiosyncratic nature of artists and their work; others started as artists themselves, transitioning into producing roles when the opportunity presented itself while maintaining a firsthand, intimate knowledge of an artist's struggle for perfection in the face of unsympathetic deadlines.

This quality makes such a difference because no matter where you work, or how big the budget is, or how large the crew is, every production will face challenges and setbacks that no one could have predicted, and there will always be times when the producers will find themselves facing the inevitable truth that the whole idea of scheduling creativity is inherently flawed. It takes a lot of love and respect for the art form to be patient with such an intangible medium. Ideas do not spring from the creative mind fully developed and perfect. They are living creatures that grow and change as you develop them. Great producers understand and love this process.

Marcelo Vignali

Production Designer, Hotel Transylvania *(Sony Pictures Animation); Visual Development Artist,* Mulan *and* Lilo & Stitch *(Walt Disney Feature Animation),* Cloudy with a Chance of Meatballs *(Sony Pictures Animation)*

I think, in general, what makes an animated project run well is when everyone does their job—and allows others to do their jobs as well. There has to be a certain level of trust in order to allow this process to take place.

Ian Gooding

Art Director, The Princess and the Frog, Chicken Little, *and* How to Hook Up Your Home Theater *(Walt Disney Animation Studios); Associate Art Director,* Treasure Planet *(Walt Disney Feature Animation)*

I've worked with many different kinds of producers during my 20 years in the animation business, and they've all (well, almost all) managed to do an equally great job despite their widely varied skill sets. As it turns out, there are an infinite number of ways of skinning this particular proverbial cat, something I couldn't have predicted way back when I started working with my first producer. The following list then, represents my ideal-world, dream producer. (Most real-world human beings will lack a few of these qualities, and still be completely effective producers.) They need to: be professional, kind and respectful; have a sense of humor; be collaborative; create realistic schedules; take the time to know their team's strengths and weaknesses and manage them accordingly; have a thorough knowledge of the production pipeline and be able to take full advantage of it; listen to their crew, even if they are offering expertise in areas unrelated to their department; have the courage to try new methodology; and be "quick on their feet." One of the most important things producers need to remember is: *don't panic!* . . . at least not visibly, anyway.

The crew looks to their leaders as a gauge of how things are going on the production, and even when the situation really is dire, panic just makes things worse.

Carol Kieffer Police

Art Director/Production Design Supervisor, The Little Engine that Could *(Universal Cartoon Studios); Art Director,* Bambi 2 *(DisneyToon Studios); Layout Stylist/Production Design,* Home on the Range *(Walt Disney Feature Animation)*

You may have the most exciting project known to man, but if the team is at odds, the experience is miserable, and if the pipeline is broken, the financial and creative results are compromised. The producer is the foundation of a production's financial health and morale. A great producer is the project's enthusiastic camp counselor, compassionate couch side therapist, neighborhood watch captain, logistic and financial traffic cop, and resident "parent"—dispensing both praise (liberally) and discipline. The best embrace the vision of the director, have an experiential knowledge of their medium's process, and grasp the value of each person's contributing role and their challenges every step of the way.

Marec Fritzinger

Art Director, Ana *(Lo Coloco Films); Visual Development Artist,* Enchanted *(Walt Disney Feature Animation); Layout Artist/ Workbook Artist,* Tarzan *(Walt Disney Feature Animation)*

A great producer is first of all a person that thoroughly understands the process of making an animated film. He or she is someone who is willing to take risks, going all the way for a project that he or she truly believes in, and transmitting his or her enthusiasm to all of the crew. His or her relationship with co-workers is based on respect. A good producer is someone who goes along with a director on his or her journey to make a great film without interfering with his or her artistic vision but who is always there when he or she is needed to solve problems and making the director's life easier.

David Womersley

Visual Development Artist, Bolt *and* Tangled *(Walt Disney Animation Studios); Production Designer,* Chicken Little *(Walt Disney Feature Animation); Layout Supervisor,* How to Hook Up Your Home Theater *and* Dinosaur *(Walt Disney Animation Studios) and* Cats Don't Dance *(Turner Entertainment)*

A good producer fits the following descriptions:

1. Knows what they are doing—no on-the-job training.

2. Respects and trusts the ability, talent, experience, and knowledge of staff.
3. Recognizes incompetence and deals with it appropriately.
4. Communicates necessary information in a timely manner.
5. Does not patronize the staff. Treats them like adults.
6. Can delegate.
7. Has to be accessible and realizes that a good relationship with the artists and production staff is just as important as a good relationship with the executives.
8. Supports the creative vision of directors and artists.
9. Can instill reality in the minds of directors and supports the department heads in instilling reality in the minds of directors.
10. Can help create an atmosphere in which the greatest possible creativity can thrive within the limitations of budget, time, and resources.
11. Leaves artistic decisions to artists.
12. Makes timely and well-thought-out decisions.
13. Doesn't confuse quick decisions with good decisions.

Steve Goldberg

Visual Effects Supervisor, Tangled *and* Chicken Little *(Walt Disney Animation Studios); CG Artistic Supervisor,* Aladdin *(Walt Disney Feature Animation)*

A great animation producer hires a crew of technical and artistic supervisors whom they trust. As the process of making the film goes from blue-sky to concrete to quota to stress-hell-finish, they continue to trust their crew. This also means that they should challenge their crew, both creatively and technically, to achieve the finest quality possible within the constraints of time, money, and manpower.

Craig Ring

Visual Effects Supervisor, How to Train Your Dragon, Over the Hedge, *and* Sinbad: The Legend of the Seven Seas *(DreamWorks Animation)*

A good animation producer really has to be a Renaissance man or woman. They have to have the people skills and management experience to lead and inspire their crew. They need to understand budgeting and scheduling in order to make sure that the project can be completed by the necessary deadline. They need to be strong creatively so that they can make sure that the project stays on the right course. Finally, they need to have the stamina of a marathon runner, because they have to do all of the above stuff tirelessly for the four to five years it takes to make an animated film.

Carter Goodrich

Character Designer, Despicable Me *(Illumination Entertainment),* Ratatouille *and* Finding Nemo *(Pixar Animation Studios),* Open Season *(Sony Pictures Animation)*

From my point of view, I would say a good animation producer is one who is willing to run interference between executives and those of us in the trenches. Speaking as a character designer, I have yet to meet an exec who is also an accomplished character designer. I'm all for collaboration, but it must be between the artists that have been hired to do what they do. When the whims and fancies of executives interfere with the work of an art director, production designer, layout artist, background painter, character designer, and so on, it only serves to weaken the whole.

Brian Master

Editor, South Park *(South Park Productions); Asst. Editor/After Effects Animator,* Tangled *and* Bolt *(Walt Disney Animation Studios); Associate Editor,* Shrek *(DreamWorks Animation)*

A great producer is open to hearing the ideas of an editor, as radical and seemingly abstract as they may be: amazing and memorable works of art and entertainment often stem from individuals thinking out of the box. In my book, the best producers are the ones that are supportive of the team and keep good on their word.

Mary Hidalgo

Casting Director, Cloudy with a Chance of Meatballs *(Sony Pictures Animation),* The Incredibles *and* Finding Nemo *(Pixar Animation Studios)*

The best animation producers are like mothers—they will laugh at all your dumb jokes, they will put all your silly drawings on the fridge, if you've misbehaved they will give you a time out until you stop whining and, most important, they will take on all the scary monsters that live under majestic desks in big offices on studio lots that frighten all the sweet, creative, funny children that only want to make sweet, funny cartoons for the world.

Steve Carell

Actor/Voice Talent, "Gru" in Despicable Me *(Illumination Entertainment), "Mayor" in* Horton Hears a Who! *(20th Century Fox Animation), and "Hammy" in "*Over the Hedge*" (DreamWorks Animation)*

As an actor, one of the things I most appreciate in an animation producer is a willingness to collaborate. When we were

working on "*Despicable Me*", the producers encouraged me, guided me, but never let me feel any less than a creative partner. Above all, they made the process fun, and I think you can see that in the finished product.

Alessandro Carloni

Head of Story, How to Train Your Dragon *(DreamWorks Animation); Story Artist,* Kung Fu Panda *and* Over the Hedge *(DreamWorks Animation); Animator,* Over the Hedge, Shark Tale *and* Sinbad: Legend of the Seven Seas *(DreamWorks Animation)*

Too often a movie crew falls into the age-old feeling of being divided into two phantom groups: the creative staff who want their movie to be great, and the production staff who want their movie to be finished on time and on budget. A good animation producer is one who is able to eliminate this fictional separation between artists and management.

Ultimately, the producer's job is *not* to deliver a movie on time and on budget: indeed, anyone can deliver a movie on time and on budget, if he or she just makes a terrible one. The producer's job is to make a *good* movie on time and on budget, and thus the artist's and producer's goal are one and the same.

But what distinguishes a good *animation* producer from any other producers?

Whereas live action is an intuitive process—build sets, shoot the live actors, edit the footage, and so on—animation is a mystery to many people, almost like magic. An animation artist must go into a room and simply create a part of a movie, out of thin air. To best respect this medium, a good animation producer is one who is truly knowledgeable and passionate about the process and the art of animation itself. The producer's job inevitably makes him or her push for faster and faster production speeds and deadlines, but for those deadlines to be reasonable and thus respectful of the crewmembers, a good animation producer must take the time and effort to understand what the individual artistic jobs entail.

Viki Anderson

Storyboard Artist, Special Agent Oso *(Disney Television Animation),* Land Before Time II, III, and IV *(Universal Cartoon Studios), and* The Iron Giant *(Warner Bros. Feature Animation)*

I think to be a good producer takes a special kind of creativity that can work in a very mixed media, especially with people but also money, time, facilities, and whatever else is needed to make the show as wonderful as possible. The producer creates the

production that creates the show. My favorite producers like what they do, are fun to be with, and have eclectic interests.

Jenny Lerew

Story Artist, How to Train Your Dragon, Bee Movie, *and* Flushed Away *(DreamWorks Animation)*

A good animation producer is a master facilitator, keeping the wheels of production greased—which means knowing all the parts of the pipeline intimately. He or she supports the director and ensures the director's vision is getting onscreen. He or she guides the unwieldy behemoth of a large production as smoothly as a small skiff. You never see them sweat. They keep everyone in the loop. They're a receptive audience. They know everyone's names. They listen. They have nerve, patience, and—most of all—a terrific sense of humor.

Steve Lumley

Cinematographer, Teenage Mutant Ninja Turtles *(Imagi Studios); Head of Layout,* Osmosis Jones *(Warner Bros. Feature Animation); Workbook Designer,* The Iron Giant *(Warner Bros. Feature Animation)*

Animation in particular is very collaborative. To me, first and foremost a good producer is one who understands the film process and particularly the film they are producing and will create an environment for the director and the creative team to realize their vision. In my experience, the best producers seem to make this happen while balancing the schedule and financial expectations quietly and seamlessly.

JC Alvarez

Final Layout Supervisor, How to Train Your Dragon, Flushed Away, *and* Shark Tale *(DreamWorks Animation)*

I recognize that it's very tricky being a producer of an animated feature, trying to manage a group of people over many years, often through many changes in game plan. It's a tightrope walk between the creative and the business side of making a film, and a good animation producer will always keep the big picture in his or her sights in this circus. Two practices to keep the big picture clear—for both the producer and his or her crew—are understanding that thorough pre-production work is integral to the success of a production, and setting up an effective approval process down the production line, which is followed by a competent leadership team. These practices make for an efficient and positive experience.

Andreas Deja

Supervising Animator, The Princess and the Frog, Lilo & Stitch, Hercules, The Lion King, Aladdin, Beauty and the Beast, The Little Mermaid *and* Who Framed Roger Rabbit? *(Walt Disney Animation Studios)*

What makes a good animation producer? A good producer is someone who:

- Genuinely likes the art form
- Fully understands every aspect of the animated film making process; in other words, knows who does what and why
- Appreciates and respects talent
- Inspires the crew to do great work
- Shields the crew from top management's stressed concerns, panic, and trouble in general
- Has a good sense of humor (animation is hard, serious work)
- Plans a great wrap party
- And most important, fights for crew bonuses!

Simon Otto

Head of Character Animation, How to Train Your Dragon *(DreamWorks Animation); Supervising Animator,* Flushed Away *(DreamWorks Animation); Animator,* Bee Movie, Shark Tale, Sinbad: Legend of the Seven Seas, Spirit: Stallion of the Cimarron, The Road to El Dorado, The Prince of Egypt *(DreamWorks Animation)*

First and foremost, a good animation producer has to have a genuine love for animation and must understand the unique power it has to tell stories. If he or she is in the animation business just because of the prestige or the more regular working hours than live action production, that individual will likely end up being poisonous and distracting to the creative environment. His or her only motivation should be to create an outstanding piece of art with a compelling story, and for the marathon it takes to make such a movie, that person needs to tirelessly champion the people and ideas that can make that goal a reality. Ideally, this producer has equal parts commitment, enthusiasm, and taste, and he or she can go seamlessly from pulling the strings in the background to fighting the daily battles to keep a film on track.

Kat Kosmala

Animator, Bob's Burgers *(20th Century Fox),* The Ricky Gervais Show *(Wild Brain Productions)*

Great producers know each team member's strengths and make the best use of all talent involved. They facilitate

collaboration and openness between people with very different skill sets (writers, designers, story artists, animators), and allow each department to do to what it does best. Most of all, they understand how to keep a team focused toward a singular vision without stifling new ideas or creativity.

Marlon West

Head of Effects, Winnie The Pooh, The Princess and the Frog, Atlantis: The Lost Empire *(Walt Disney Animation Studios)*

The whole tone of the production starts with the producer's personality and approach. If they are stressed and let that stress flow downward, you can be assured that the production team and their managing style will be of the same ilk. When producers are confident, knowledgeable, and certain, they usually surround themselves with like-minded folks. At the very least, they will set a positive tone for the rest of the crew.

Charlene Moncrief

Animation Checker, T.U.F.F. Puppy *(Nickelodeon Animation Studios),* G.I. Joe Renegades *(Hasbro Studios),* Scooby-Doo! Mystery Incorporated *(Warner Bros. Animation); Final Checker,* The Mighty B! *and* Making Fiends *(Nickelodeon Animation Studios),* The Replacements *(Walt Disney Television Animation); Production Department Manager,* Chicken Little *(Walt Disney Feature Animation)*

A good animation producer is someone who understands that making quota and shipping a show on time is only half the battle won. The other half of the battle is being able to successfully maintain the integrity of the most crucial part of the equation: the art. Without the art and director/creator's vision intact, then all the producer has produced is yet another product that is no different than a widget or a car part. Maintaining the uniqueness, the spirit of the art, without surrendering it to deadlines and corporate expectations—that's what truly makes an animation producer "good."

Lawrence Chai

Senior Software Engineer, The Princess and the Frog, Bolt *(Walt Disney Animation Studios); Software Engineer,* King Kong *(WETA Digital)*

An ideal producer is someone who is flexible and solicits input. On a recent film, the producer asked the crew to submit five ideas that would help improve the workflow. Many of the suggestions

were incorporated during the course of production, were proven successful, and were later adopted by subsequent productions.

Lauren Carr

Character Technical Director, Bolt *and* Chicken Little *(Walt Disney Animation Studios); Visual Effects Artist,* Spirit: Stallion of the Cimarron *(DreamWorks Animation)*

Because most producers in 3D animation are not creating artistically or technically, they need to have a broad understanding of the detail that goes into a production. This is extremely important in making accurate financial decisions and time allotments to each department. A good producer for animation needs to enforce the production to stay within their time limits. Therefore a good producer needs to have teams that are not only talented but work well together, stay organized, and respect the time factor. The leads also need to be clear with the producer on what they need in order to get their part of the show done at its highest potential.

Cindy LeJeune

Director, VFX Production Finance, Walt Disney Studios; Freelance Visual Effects Production Accountant; Animation and Visual Effects Production Accountant for 20th Century Fox Studios and Sony Imageworks; projects include Star Wars: The Clone Wars *(LucasFilm Animation),* Shrek 2 *(DreamWorks Animation),* Tim Burton's Alice in Wonderland, G-Force *(The Walt Disney Studios),* How the Grinch Stole Christmas *(Digital Domain),* T2-3D *(Universal Studios)*

Having worked with the best producers in the business, they are experts at negotiating, planning, and communications. The best producers have a third eye and a sharp pencil. They have the foresight to bring the director's vision to the screen while navigating increasingly tight budgets and schedules.

When it comes to managing the financial side of a creative endeavor such as film making, a good producer is the key to success.

Camille Leganza

Production Supervisor, Megamind *(PDI/DreamWorks Animation); Executive in Charge of Production,* The Secret of Kells *(Cartoon Saloon); Script Supervisor,* The Incredibles *(Pixar Animation Studios)*

The ideal animation producer is a leader for their crew and a partner with their director; they are able to motivate and connect with people to get them to give their best. They have deep

knowledge of production and great respect for creativity and are able to walk the line between the two. The producers I have enjoyed working with most have been genuinely exceptional leaders and knew how to lead a crew through the storm of production. They are sharp, good-humored, and understand what it takes to get things done. They are great communicators and recognize the contributions of their crew. Animated productions require endurance, so it's vital to keep their crew focused and engaged. Last, the ideal producer has the trust and confidence of their director and partners with them to bring the director's vision to the screen.

Jeannine Berger

Post-production Supervisor, Hop, Despicable Me *(Illumination Entertainment),* Fantastic Mr. Fox *(20th Century Fox Film Corporation),* Coraline *(LAIKA Entertainment)*

A good producer is a good communicator. This is a person who keeps their team informed about upcoming events as they become aware of them so that the production team can work to a realistic schedule. Communication between a post supervisor and the producer will help both keep their budget (i.e., informed and planned decisions save money).

A good producer must be confident enough in their own abilities to ask questions of their team to enable them to do the best job possible. This also implies that the producer hires the best possible team in order to make the best film possible.

Lori Korngiebel

Production Manager, How to Train Your Dragon *(DreamWorks Animation); Post Production Supervisor,* Madagascar *(DreamWorks Animation),* Lilo & Stitch *(Walt Disney Feature Animation)*

A good animation producer is a great communicator and listener who understands the process of animation from story through post-production.

Daniela Mazzucato

Production Manager, The Croods, Monsters vs. Aliens *(DreamWorks Animation); Production Supervisor for Story and Animation,* Kung Fu Panda *(DreamWorks Animation)*

A good animation producer is someone who can lead and manage by keeping things moving forward and balancing the needs of production without hindering or sacrificing the

creativity and quality of the film. Good producers set the overall tone and atmosphere for the production, serving as team players, good listeners, and champions of all the artists and production staff. They are encouraging and supportive, respectful and appreciative, level-headed and calm—not only when things run smoothly, but also when challenges arise.

Jeff Deckman

Associate Production Manager, Cloudy with a Chance of Meatballs *(Sony Pictures Animation); Assistant Production Manager,* Spirited Away, Dinosaur *(Walt Disney Feature Animation)*

Good animation producers, like good animation artists, have an intrinsic love and appreciation for the art form, and they never stop learning on the job.

They trust their production staff and delegate appropriately, but they are available for questions and input when needed. They know the buck stops with them, and the staff knows the producer has their backs.

Feature animation films take years to complete, making burnout an ever-present threat to the production crew. But good producers keep up morale by making everyone—regardless of title or hierarchy—feel important and appreciated. The best of the best have an uncanny ability to make you feel proud of your work.

Lauren Malizia

Production Assistant, The Croods *and* Guardians *(DreamWorks Animation); Intern, Animation Department,* Monsters vs. Aliens *(DreamWorks Animation)*

First, a good producer must be a good listener. In order to understand the needs of the production and the overall well-being of the crew, a producer must open his or her eyes and ears to the comments and concerns of the team. It is understood that a producer's job is a daily tug and pull of schedule changes and production needs, but it is the way the producer manages through that daily storm and shines a positive light onto the situation at hand that makes him or her good.

Second, a good producer must have a solid understanding and passion for storytelling. Of course the FX shot of the exploding bunny hole looks pretty cool at the end of the day, but if the story lacks good characters and a compelling story, you have lost half the potential of this cinematic experience. Knowing the properties of well-developed characters, entertaining plot points, and a well-executed visual narrative is crucial to any successful animated film.

Pamela Kleibrink Thompson

Recruiter; Production Manager, Family Dog, *special episode for Steven Spielberg's* Amazing Stories *(Hyperion/Kushner Locke), and* The Simpsons *(Klasky/Csupo); Ink and Paint Supervisor,* Bebe's Kids *(Hyperion)*

The recipe for a good producer is like a magic potion—the person in charge of the production can cast a spell over the entire crew. A good producer is a dream enabler, gathering the resources needed so that creators can bring their vision to life. A good producer is organized, diplomatic, and flexible, yet strong enough to convince the creators that their project is ready for the public. A strong producer inspires and motivates, plans well, and is a problem solver. The producer is a guide and should set realistic expectations, as he or she is responsible for delivering the project on time and on budget. A producer must have the courage and strength to be a leader of creative people and enjoy the multitude of personalities inherent in any production environment.

Dan Sarto

Publisher, Animation World Network

Following the industry online is as important to a producer as navigation charts and sonar are to a ship's captain: you can still operate without them, but just consider how damaging—and avoidable—it would be to run aground. A good animation producer knows how to use the Internet for strategic marketing and publicity in order to best position his or her project on a global platform and reach a worldwide audience.

The Producer's Thinking Map

The purpose of the Producer's Thinking Map (Figure 2-1) is to provide you with a visual guide for the main steps involved in producing an animated project. For each topic listed in the figure, you will find a more detailed discussion in the corresponding section of the book. Both formats—feature and television—go through similar steps during the pre-production and the post-production stages. The most significant difference is where and how the production phase itself is handled. Features are often animated in-house, and television series are usually outsourced to subcontracting studios. These differences are illustrated by allocating separate columns under the production category for feature versus television.

One way of comparing the two formats is to look at their respective production pace, which is based on the time and costs

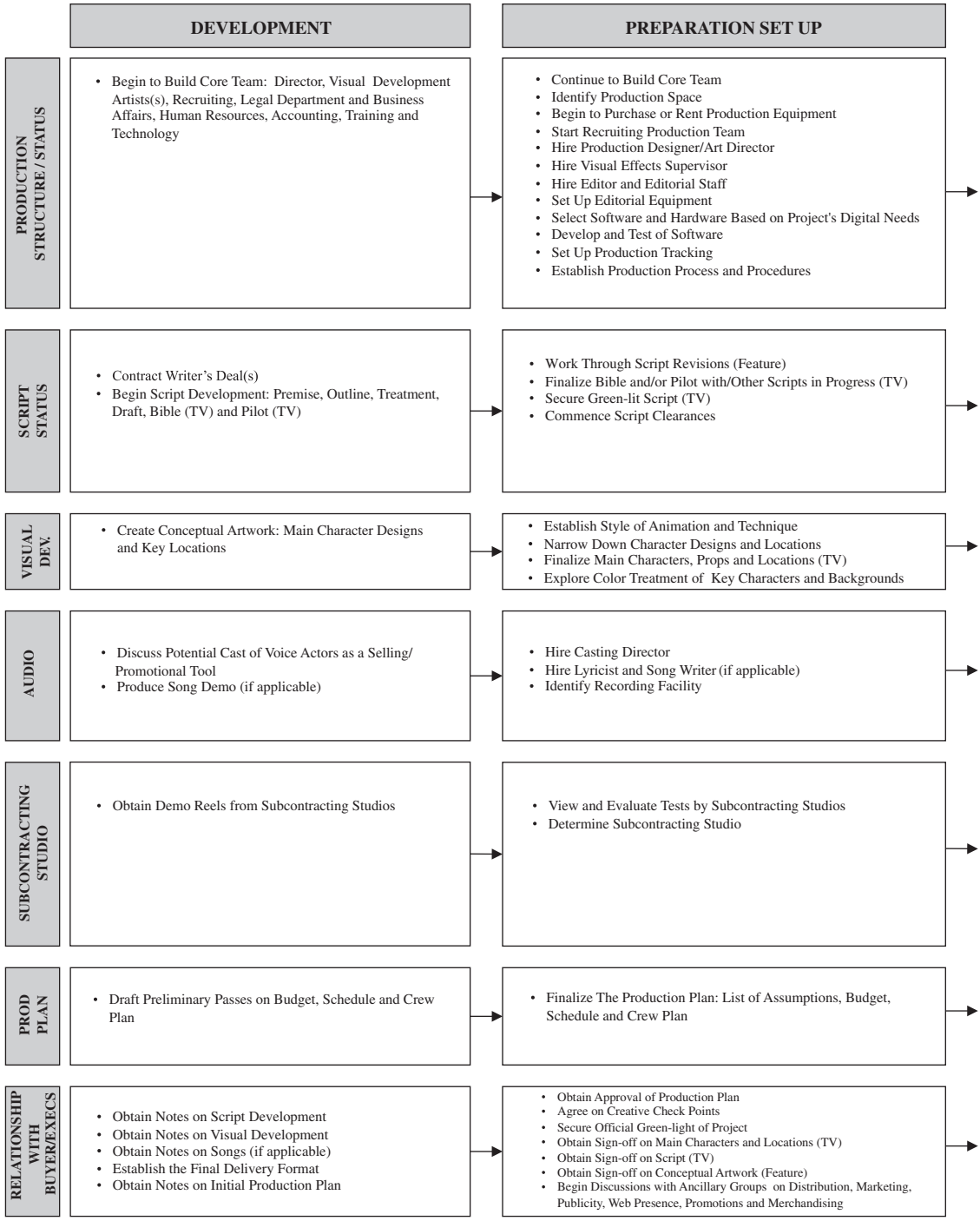


Figure 2-1 The Producer's Thinking Map.

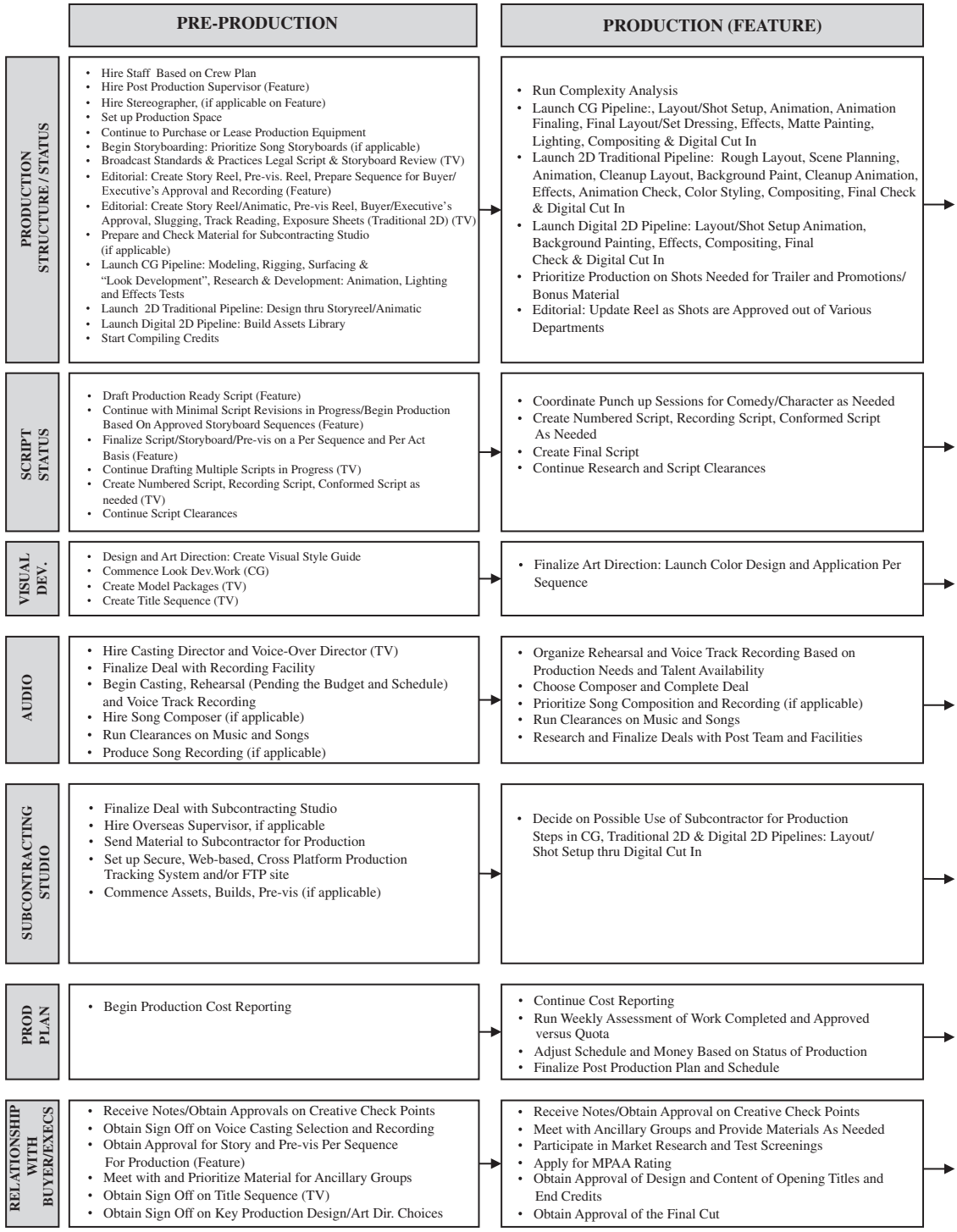


Figure 2-1 (Continued).

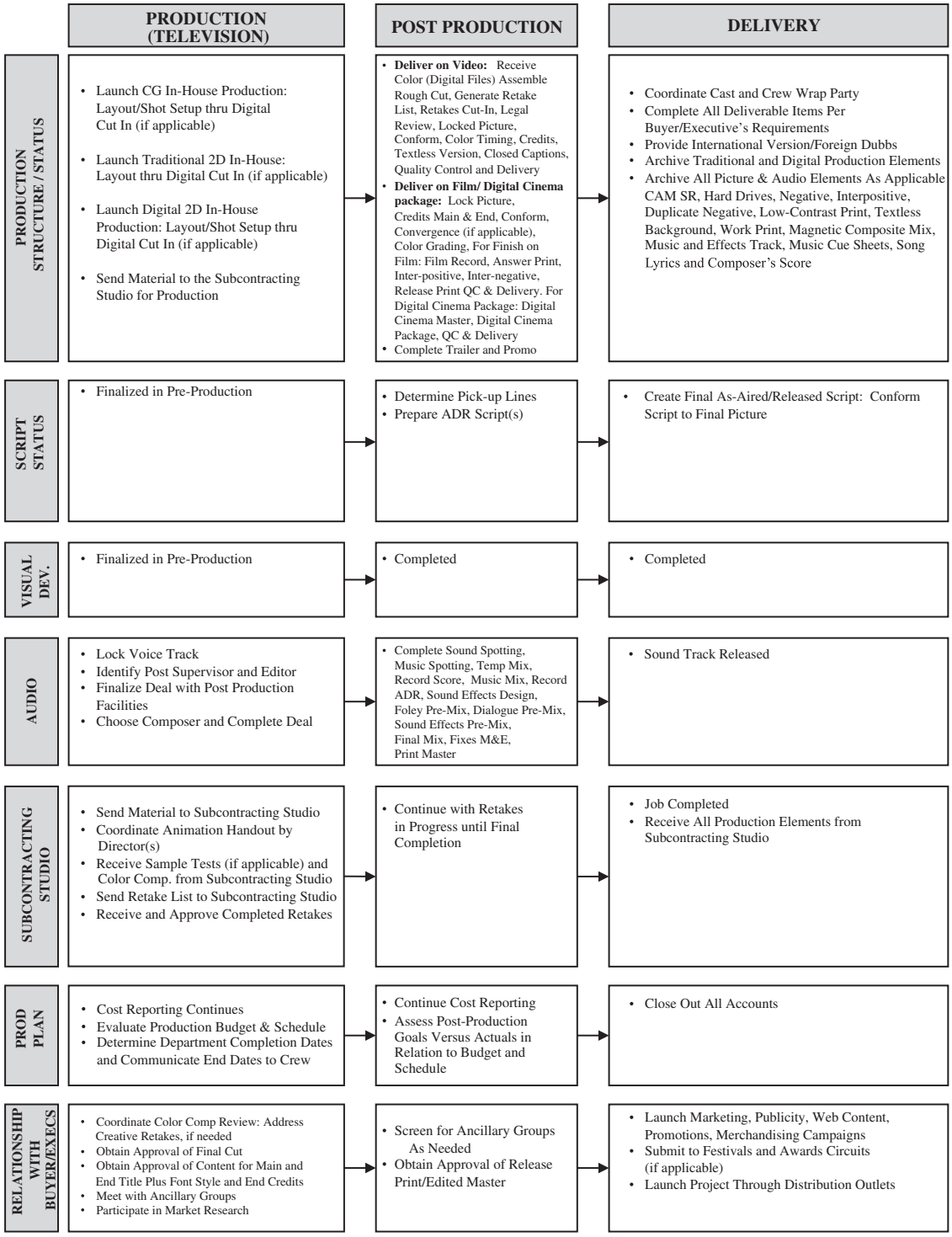


Figure 2-1 (Continued).

necessary to produce each product. When producing a television show, whether it is 13 episodes or 65, the speed of the project is like that of a sprinter. Knowing how to get all the elements in place, sent out in time, and put through post-production to meet air dates is similar to running at top speed all the way. With a short schedule and limited resources, there is little time for revisions and alternative versions. The key to success in producing for television is being quick on your feet and delivering fast.

In features, an attempt is made in just about every stage of production to further refine the story. Whether in the storyboard phase or animating (See Chapter 9, "Production," for more information), time is spent on tweaking each shot in order to creatively "plus" it as much as possible. Unlike episodic television, in which the turnaround allows you to view the fruits of your labor in a short span of time, in features, the pace of production is much slower and you will not see your hard work on the big screen until potentially two or three years have elapsed. This method of filmmaking is equivalent to running a marathon. It is crucial to have stamina and to pace yourself on a project so you can hit the finish line still standing.

In all formats, the producer needs to be a master juggler, and the Producer's Thinking Map will help you keep all those balls in the air.

3

HOW TO IDENTIFY AND SELL PROJECTS

This is where the adventure begins: identifying a concept. Imagine yourself as a U.S. Navy SEAL. You are on a reconnaissance mission. You need extensive preparation and training for the process. Every step that you take can potentially have larger repercussions, so you must be mindful of every action. Equally as important, you must pace yourself through all kinds of obstacles in a labyrinth. Before embarking on this mission, you need to have a thorough understanding of the landscape and mindscape ahead, which involve these key stages:

- Spotting the idea
- Defining the format and target audience
- Identifying the buyer
- Developing pitch material
- Hiring representation
- Entering negotiations

The selling journey of every project is unique depending on who you are, what you are pitching, and to whom you are pitching it. There is no one distinct path to follow, nor is there a specified timeframe in which you should expect results. This fluidity may seem frustrating to navigate at times, but it provides you with the ability to tailor your pitch to best suit your individual situation and project. One thing is consistent, however: at each step along this journey you need to be open to feedback and possible changes that will inevitably arise—and you need to be ready to respond quickly and intelligently.

Spotting the Idea

Your first goal is to find an idea. You might get inspiration through a piece of art, a dream, or a book. There are no set rules as to when or where you can find a winning concept, but the key is having the ability to recognize one and know how to identify, package, and ultimately sell it to the appropriate buyer.

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As a producer, you may have an original idea or explore one that has been previously established. Going down the original idea path requires a strong conviction that the concept and characters are highly appealing and viable in the marketplace. If you choose to develop and sell something that is already established, you can search for materials in a wide variety of locations: potential story ideas can be found in comic books, graphic novels, classic tales in the public domain, toys, and children's books and songs, for example. Be sure to keep in mind that unless you are the creator or the material is considered to be in the *public domain* (that is, anyone can use the rights as no one person or entity owns them), the next step must be exploring how you can obtain the rights to use it.

Searching for brand-new material? Countless "desktop-created" original shorts are available for viewing through publicly accessible videos on websites such as youtube.com, vimeo.com, or funnyordie.com. Animation podcasts and artists' personal blogs are a direct peek into such creative outlets. More often than not, the artist has created the postings with the hopes of having his or her material picked up for development as a feature film, television series, web, game, or mobile content, unless otherwise noted. It's an easy way for any artist to get his or her work out into the world and an equally easy way for producers to find the next great idea or artistic talent without spending a dime or leaving the comfort of their home or office.

Comic books, comic strips, and graphic novels are among the easiest types of material to adapt for animation. With an established visual style, fully developed characters, and a storyline, the producer has almost all the main ingredients necessary to start pre-production. Notable comics and graphic novels that have been sold to studios include *Over the Hedge* (see Figure 3-1), from the comic strip written and drawn by Michael Fry and T. Lewis, and *Persepolis*, the Academy Award–nominated film based on Marjane Satrapi's graphic novel. Typically, the best places to locate comic books and graphic novels are comic book conventions. For example, the annual Comic-Con International summer event in San Diego is the largest comic book convention in the world; all the major publishers, distributors, and many independent creators come to show and sell their books. Because not everyone can travel to conventions, visiting and perusing a neighborhood comic book store is another good way to familiarize yourself with the world of comics. The Internet also hosts a myriad of web comics and podcasts related to comics.



Figure 3-1 *Over the Hedge* ("*Over the Hedge*" ® & © 2006 DreamWorks Animation LLC, used with permission of DreamWorks Animation LLC).

Children's books are another bountiful source for animated projects. Successful examples of these adaptations include *Curious George*, *Cloudy with a Chance of Meatballs* (Figure 3-2), and *Shrek* (Figure 3-3), to name just a few. Even contemporary tween- and teen-targeted literature has had great success when developed into animated films, such as *How to Train Your Dragon* and *Coraline* (Figure 3-4). Children's classic literature is an obvious choice for development, with its reliable marketability and name recognition. It is rare, however, to find a well-known children's title that has not been already optioned or remains in public domain. Something to keep in mind is that popular books can be costly to option, so depending on your access to financial resources, this may or may not be a feasible route. It is therefore useful to look for stories that are either newly published or are already in the public domain. Looking for material that is hot off the press? Consider attending books fairs or visiting your local independent bookstore and asking the person in charge of ordering new titles to share his or her favorite recent picks. Examples



Figure 3-2 *Cloudy with a Chance of Meatballs* (© 2009 Sony Pictures Animation, Inc. All Rights Reserved).



Figure 3-3 *Shrek Forever After* ("*Shrek Forever After*" ™ & © 2010 DreamWorks Animation LLC, used with permission of DreamWorks Animation LLC).

of public domain stories are *Tangled* (Figure 3-5), based on the fairy tale of Rapunzel, and *Hoodwinked* (Figure 3-6), a twist on the folktale of Little Red Riding Hood. Taking a famous story and adding a new spin to it is very popular, as is evident in the box office success of these titles.

If you are interested in developing original source material but can't write or draw, you may want to team up with an established artist or up-and-coming talent in the field. If your funds are limited, you might consider teaming up with an artist who is willing to accept a smaller fee in lieu of partial ownership of your project. In search of talent? Animation festivals are excellent forums for finding great material and meeting animation directors and animators. At such events, you are able to view the work of renowned artists as well as student films that might be perfect for developing into commercial projects, such as the case of *A Grand Day Out* (Figure 3-7), the first of the "Wallace and Gromit" stories by Nick Park, which was discovered while it was still in production as Park's graduation project for the National Film and Television School in the United Kingdom. At first glance, developing and preparing original material to sell may seem like a relatively easy path to follow. It is deceiving, however, as coming up with a strong story that feels fresh and has a unique voice



Figure 3-4 *Coraline* (© 2009, Courtesy Focus Features).



Figure 3-5 *Tangled* ((L–R) Flynn, Rapunzel © 2010 Disney/Pixar. © Disney Enterprises, Inc. All Rights Reserved).

and compelling characters takes creativity and time. A key concept to keep in mind is that an original idea is a risky proposition for buyers, as it is untested. Although it is impossible to assess the future success of a project, the basic idea must nevertheless be distinctive and promising enough in order for the buyer to be willing to take a chance on it and invest the resources to get it into development and production.

Before spending money on a property, it is wise to do some research to make sure that there is actually a market for your concept. You may think you have found the most exciting superhero since Batman, but there may be similar properties in development, or it could be that superheroes are not currently popular. Market research is therefore essential. One studio may only look for original characters; another, preestablished properties; yet another may seek dramatic prime-time material. Although it is not easy, you should consider picking up the phone to cold-call executives and find out what they are looking for. Do your homework in advance by familiarizing yourself with the type of shows that each studio has produced. If indeed you do get the opportunity to speak with someone and your idea seems to fit the bill, be prepared to summarize and pitch your idea in just a few sentences, as discussed later in this chapter.



Figure 3-6 *Hoodwinked*
(© Kanbar Entertainment, LLC).



Figure 3-7 *A Grand Day Out*
(© NFTS 1989).

Perseverance and Belief in Your Vision

Jill Sanford, Director, Original Series, Disney Television Animation

In development, we are always looking for projects that have that special something—that little spark of potential, whether it's in the characters or the concept or the artwork or the talent pitching the project. In terms of finding that gem of a property, there are no rules for how a project comes into us in a pitch form. Sometimes it's a great one-line pitch or a funny drawing of a character, and sometimes it's a 50-page bible. Each story and character has its own strengths and merits, depending on where it is in the development process. The question that many people ask is: what is it that makes a project stand out and how do you know if it is going to be a hit? The truth is that no one knows what is going to hit big, but we try to stack the deck as much as we can to give each show we get behind the best shot possible. Because we see so many ideas, picking those special projects and people that we want to invest the time and resources in is based on an understanding of our brand, combined with experience, intuition, and sometimes a little bit of luck. A great example of this is the story behind *Phineas and Ferb* and how it developed at Disney Television Animation.

When the idea for *Phineas and Ferb* initially came to our offices at Disney, it was a cute concept that seemed like it had that little nugget of potential, at the very least. At the time, we were trying to be a little more "hands-off" with our development projects and give them time to actually develop—funnily enough—before showing them to the entire executive team. So when Dan Povenmire wanted to pitch out the full storyboard instead of writing a script, we were all for it. The studio executive and I looked at the initial outline, gave a bit of feedback, and the next stage I saw was a full storyboard. It was the first time I know of at TVA [Disney Television Animation] that we'd ever seen an outline pitched with full storyboards, which impressed us because it really made sense for this show: having two lead characters that don't talk is hard to play in a script, and visual expression is vital to understanding what both Ferb and Perry the Platypus are all about. Dan and his co-creator Jeff "Swampy" Marsh had even written a theme song for the show, and that just further proved how deeply these creators knew their characters and how to present them effectively. Although this extensive a presentation is unusual and unexpected, it helped us fully grasp their vision for Phineas and Ferb and get behind it. The characters felt really fresh and had a soul to them. Plus, the board was really funny. That always helps.

During the pitch, it was clear that Dan and Swampy were more than prepared to survive the development process, as they had spent more than eleven years committed to making this property happen. This faith in their characters combined with their strong portfolio of experience around the industry made them appear to be the kind of team that we could get behind. As it turned out, we were right in our assessment. During development, they were good about being

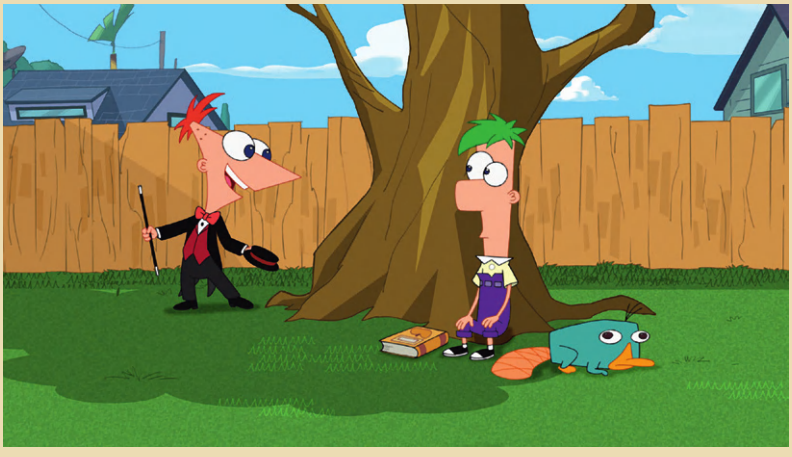


Figure 3-8 *Phineas and Ferb* (© Disney Channel).

collaborative, and they were patient when they had to take notes from an ever-changing series of executives. They knew when to pick their battles and work within the process to get their vision onto the screen.

It took Dan and Swampy a long time from when they first started to shop the project to when they got the green light at Disney. But if you asked them if it was worth it, I'm pretty sure they would say yes . . . especially now that they've got one of the most popular shows in the history of Disney Channel, an Emmy, multiple other awards and nominations, and an emerging franchise for the Walt Disney Company. Ideally, this tale of perseverance will keep you motivated to keep on pitching, so that you yourself can say enthusiastically, "Hey, Ferb, I know what we're gonna do today . . . we're gonna find the right buyer for our concept!"

Producers have to be smart and frugal about how to go about the process of developing on a budget, choosing wisely where to spend money and time when preparing for a pitch. If you believe that you have a strong story already, you may not need to spend money on creating original artwork but may instead rely on various reference looks from visuals already in existence.

Keep in mind at all times that the gestation period for a new idea has no defined schedule or path to success. What is consistent is the need to work and rework an idea over and over, poking holes into it and finding gaps. With every challenge come new solutions and ideas that can typically make a project better. If your project development process goes down a path that is not working, don't be afraid to throw out ideas and start again. Stepping back from an idea and putting it on the shelf for a while so that you can see it with fresh eyes is an effective way of evaluating your work. It is amazing what issues will become apparent and what great solutions come to mind when you give yourself the opportunity to create a healthy distance between yourself and your project. (See Chapter 5, "The Development Process," for more details regarding the typical steps taken during full development of a project.)

Defining the Format and Target Audience

Once you have identified a property, it is important to determine its future format. Is it more suitable for a television series, theatrical features, direct-to-DVD, webisodes, gaming, or perhaps an iPhone/iPad application? If the answer is "more than one of these options," that's great news, but in order to get started, make a decision based on the approach that is creatively and economically doable. Having a clear answer to this question up



Figure 3-9 *Toy Story 3* ((L–R) Slinky Dog, Aliens, Bullseye, Jessie, Mr. Potato Head, Woody, Mrs. Potato Head, Rex, Buzz Lightyear, Hamm. © 2010 Disney/Pixar. © Disney Enterprises, Inc. All Rights Reserved. Slinky ® Dig © James Industries. Mr. Potato Head ® and Mrs. Potato Head ® are registered trademarks of Hasbro, Inc. Used with Permission. © Hasbro, Inc. All Rights Reserved).

front will help you proceed with your pitch development efforts efficiently in terms of both time and money.

In the television arena, the target audience markets are very defined and niche, based on the demographics of the viewers and the network's brand. Ask yourself if the concept is aimed at a preschool, tween, teen, a prime-time audience, or is it best suited for adults only? If it is not clear who the viewer is, you may want to reconsider your choice or make defining it a top priority during development.

The audience for animated features is generally much broader. Unlike television, the target audience for feature properties developed by the larger studios tends to include both children and adults, as the success of *Happy Feet* and the *Toy Story* films (Figure 3-9) attest. Similar to features, home entertainment projects are also developed for a broad audience, but the lion's share of that market is children or, more specifically, parents buying DVDs for their young children.

Although large studios tend to develop for a broad marketplace, animated features can also be targeted at a more specific audience while maximizing a lower budget and wisely directing marketing efforts to that desired viewing segment. Independent producers have found ways to produce more niche, lower-budget films thanks to direct distribution outlets and viral marketing efforts. Films such as *The Secret of Kells* (Figure 3-10) and Nina Paley's passion project *Sita Sings the Blues* (Figure 3-11) have achieved critical success with much lower budgets than those of the typical major studio release.



Figure 3-10 *The Secret of Kells* (© 2009 Cartoon Saloon).



Figure 3-11 *Sita Sings the Blues* (© Nina Paley 2008).

Identifying the Buyer

There are two different types of buyers. The first is a group with a *distribution arm*, such as a network, cable company, or movie studio. Typically, it is advantageous to sell your property directly to one of these outlets, as the distribution and ancillary support (licensing, marketing, etc.) are already in place. On the other hand, depending on the property and your background, it may make more sense to sell your idea to an independent production house and partner with them to get your property sold. Though independent production companies ultimately need to find distribution, they may have other strengths to offer. The advantage of working with an independent production house is twofold. First, such companies tend to be more accessible. Second, they can

draw on their internal resources and experience to develop and prepare your project for pitching to targeted buyers. Depending on the size and reputation of the company, it may be able to provide *deficit financing* (production money used to supplement the license/production fees paid by the buyer). The independent production house could also be better equipped to turn a property into a franchise, in terms of enough time to give it the attention required to reach such a goal. Or it may own an animation facility that could actually produce and develop the project.

There are several ways to find potential buyers. It is up to you to do your homework to find and target them. Read industry magazines (such as *Hollywood Reporter*, *Variety*, and *Animation Magazine*, to name a few) that interview and highlight key executives to discover who's who and what they are buying. Another option is to browse the Internet for websites and blogs on the industry. Depending on where a buyer works (that is, a production company, studio, network, or cable company), he or she may have a different title. The most common titles are creative executive, development executive, current executive, and programming executive. Whatever they are called, the buyers' overall responsibilities are generally the same. Their goal is to identify new and one-of-a-kind concepts to develop for the company. Their success is based on getting projects greenlit, produced, and—most important—turned into a hit. It is therefore vital that they seek out the material to be the next highly sought-after property that audiences want to see.

Once you have a solid pitch, don't be shy to pick up the phone and cold call. With that said, again, make sure to have done your homework to find out what type of development materials your potential buyer is seeking. Some studios require a fully fleshed out script; others are more open to a treatment and initial characters only. Each set of executives has their own personal approach to how they find and develop properties, so be sure to tailor your pitch to address their needs. Once a project has been selected, it is the job of the executives to shepherd it through the negotiation, development, and—in most cases—production processes.

Creative/Development Executives

The responsibilities assigned to an executive vary from one studio to another, as do titles. In some studios, for example, the *development executive* may work on a project's conceptual phase and remain equally involved as it goes through production, post-production, and final delivery. Elsewhere, when a project has completed development and is greenlit for production, another executive inherits responsibility for the project from the development executive. In television, this position is commonly referred to as a *current executive*. In this type of structure, after a brief

transition period during which both the current executive and the development executive are jointly involved, the current executive takes over the show. From this point on, the current executive manages its creative progress until the completion of production. For the sake of simplicity and clarity, we refer to the key creative point person on the buyer's side as the *creative executive*.

In terms of titles, a person with the creative executive title is typically in a more junior position within the studio hierarchy. This junior executive is probably the most accessible person amongst the development staff, as it is his or her job to be a gatekeeper while finding and sorting through ideas to share with the more senior members of the team. As you go up the ladder, there is a *director*, followed by a *senior director* (depending on the company), and then the *vice president*, *senior vice president*, and so on. The higher the person is, the more responsibility is placed on his or her shoulders in terms of having the power to option projects. Ultimately, the person in this position can decide how much money is allocated to the various phases of development and also whether it is beneficial to attach specific talent to the project. The more senior the person is, generally the tougher he or she is to access—unless, of course, you are already established in the business. With that in mind, another person that is generally approachable is the *assistant to the executive*. The assistant is usually a good person to befriend, as he or she can be a great source of information, possibly letting you know what the executive is looking for as well as getting you a meeting with him or her.

The creative executives' primary role is to identify properties for the company to pursue. They spend their time looking at all kinds of materials, including published works and original concepts. In their widespread search for talent, they attend film festivals; meet and foster relationships with writers, publishers, and agents; visit comedy clubs; and view postings on the Internet. They need to be in touch with what's hot, be able to recognize upcoming trends, and also possess a good sense of timing so as to jump on an idea before it is otherwise taken. Along with searching for properties, creative executives meet with producers, directors, and creators to take pitches and find material. In general, having an open-door policy allows the executive to listen to many pitches, therefore improving the probability of finding a hit. Once he or she has found something of interest, it is this executive's job to sell the property to his or her supervisor, for development and ultimately for production. The person they report to is typically the *head of programming* for the studio—the individual who has the ability to purchase or greenlight a project and put the necessary funds behind it.

The creative executive on your project is an integral part of the process in terms of championing your project forward.

Depending on their level of seniority, they may not be individually able to greenlight the project, but if they believe in it, they have the power to keep your project alive by selling it to key individuals within their company, giving it the best chance for production. It is therefore your job as a producer to ensure that their initial enthusiasm for your story continues throughout the lengthy and often bumpy process of development.

During development, creative executives are very involved in finding and hiring the core team for a project, bringing together the director, producer, artists, writers, production designer, and art director. Once a project is in production, the executive monitors its creative progress to ensure that the story is working. Depending on the budget, schedule, and deal struck by the producer, these executives have input at key creative checkpoints throughout the process with regards to story, character development, and art direction. Should your project get produced, the creative executives are often very involved in getting it promoted both internally on a corporate level and externally to the public, thereby helping to secure its success. Finding ways to give the project as much exposure as possible is key not just for the sake of the show, but also for the future of the executive and his or her career.

Production Executive

When a project is close to being greenlit for production, another key executive is included in the process of analyzing whether it can actually be produced or not. This is the *production executive*. It is the production executive's job to assess whether the agreed-upon creative goals of a project can be achieved within the fiscal parameters of the production. In most cases, production executives report to the *head of production*.

The production executive works closely with the creative executive and the producer to structure a budget and schedule for both the development and production processes. Once a project begins actual production, the production executive monitors its progress, making certain that the creative needs of the buyer are served while meeting the agreed-upon schedule, budget, and delivery requirements. When a production has problems such as falling behind schedule, it is the role of the production executive to troubleshoot the situation, working with the producing team and creative executive to find solutions and get the production back on track.

Developing Pitch Material

It cannot be stressed enough how important it is to research your potential buyer and determine exactly what type of materials they want to see. As noted earlier, some buyers may be

interested in a fully developed concept with a completed script and visuals, whereas others may only wish to see a premise and some rough designs. It may also depend on the profile of the project. If it is a well-known franchise, little or no development may be necessary to sell a project to a distributor (who will then partner with you to develop the material to suit their brand and market requirements). Many different approaches can be equally effective; it all depends on your concept and the would-be buyer.

When preparing, bear in mind that people can only take in so much before you start to lose them; therefore, keep the materials concise. No matter what form of pitch you choose, the three key elements to have in place are:

- The concept(s)
- The character(s)
- The story

For television, there are two main factors to set up from the start: a clear concept and a defined target audience. You should be able to explain what the series is about in a *logline*, meaning one or two sentences. Make sure you can communicate what sets this show apart from all of the others out in the marketplace. You must also have several compelling stories prepared in order to illustrate that the property has a life beyond the *pilot episode* (the first episode of a TV series) and that there is a reason why viewers would select this show over other choices. In most cases, if it is an original prime-time property, it is best to have a pilot script prepared. Keep in mind that if the network goes forward with optioning the property, it will probably do further development to the materials to shape the project for its specific audience.

For long-form properties such as feature films, you should be able to take the buyer through the main storyline using the classic structure of a beginning, middle, and end, presenting it in a concise and exciting way that will hook your audience. Introduce the main characters and a few supporting characters as you come to them in the process of pitching the story rather than up front. Be prepared to explain the subplots when questions arise, but don't try to include them in the main story pitch, as you want the story to be crystal-clear. If the property requires it, outline the rules of the universe: for example, do humans and animals interact? Define the target audience and describe the tone using frames of reference such as other movies or well-known stories. Artwork is not vital; however, a few carefully selected quality setups illustrating the characters in their world can be useful. You can flesh out your characters by selecting a few actors that might be considered for voice-over; however, do this sparingly and only if the project

warrants it. If a composer is already attached (although this is not at all necessary), have a demo available. It is good to have a brief synopsis containing only the key story beats prepared to leave behind or to send as a follow-up. Prior to pitching, do not feel that you need to have ancillary partners such as merchandising in place. This aspect of the process is usually handled later on, and is not vital to the success of a pitch: in fact, if it is approached as a key focus in your pitch, it can be distracting to the buyer. However, if the property has *transmedia* opportunities (multiple formats to which the characters naturally lend themselves, such as gaming, web shorts, etc.) in addition to the format you are pitching, you should be prepared to cover all options. Depending on the buyer, having a business partner can be helpful, but at this stage, the main goal is to sell the idea on its own merit. For *feature film executives*, a strong story concept that fits with their studio's overall mandate is likely to work best. If all of these pieces fall into place, and the pitch holds up to their questions, an executive will want to pursue the project.

Pitching

Before going into a pitch, practice your presentation. First impressions are important, so it is critical to come off as polished and professional as possible. Brief is best. You should have the pitch down to ten minutes or under for a series and ten to fifteen minutes for a feature—no more! In both cases, it is a good technique to come up with a sentence that sets the tone of the pitch and provides context for your audience. This sentence may be as simple as referencing a well-known movie or story or combination of ideas to which your project is similar. If you have a creative partner, decide who will handle what during your meeting. Evaluate the strengths and weaknesses of the partnership. Your strength may be in drawing and your partner's in selling the story. Take practice runs, setting each other up rather than stepping on top of one another during the presentation.

When pitching, try to remain as natural as possible. Analyze your audience's response and try to cater to what their needs are rather than taking the pitch in a direction that is suitable for you. Again, be short and to the point—don't waste time. Summarize what you are selling and get the concept across in just a few sentences.

Note that some studios may require you to sign a submission release agreement before you pitch to them. The purpose of this is to make clear the studio's position of no obligation to a producer by virtue of hearing a pitch, even holding the company

harmless if the studio develops a project based on ideas similar to those pitched. This release is typically required for those people who have original ideas and are not established in the industry. However, in some cases, even the most established producer will be required to sign one of these agreements before he or she is allowed to pitch an idea.

Post Pitch

After a pitch, it generally takes time to get a response. Creative executives have many projects that cross their desks each week. Consequently, it is almost impossible for them to get back to everyone in a timely manner. Unless you meet with the person who can greenlight optioning a property, the creative executive still needs to sell it to his or her superiors, who may want you to pitch the property again directly to them. They may also ask you to send more materials. After the pitch, being patient is critical. You should expect to wait at least four weeks before hearing anything.

If this isn't the project for this executive, take the rejection gracefully. You want to leave a good impression with your executive so that he or she will want to see you again, at this job or the next, because executives tend to move around a lot. (It has been said that the average career span of a creative executive at a particular studio is between one-and-a-half to three years.) If you are in it for the long haul, chances are good that you will cross paths with this individual numerous times at different studios.

If you get a positive response, you should be very excited, as you are one step closer to the fun process of in-depth development. But first you need to put an agreement in place with your new creative partner.

Hiring Representation

Whenever possible, it is advantageous to have a lawyer or an agent on your team when you pitch your project. As a company policy, some executives may not even meet with you or review a property unless you have representation. Executives prefer that the creator and/or producer be attached to a lawyer or agent for a number of reasons. The existence of these relationships helps avoid any potential misunderstandings when a similar project is greenlit or put into development. If the executive decides to option the property, you will be in the position to make a deal immediately. It also indicates that your material has been reviewed by an industry professional who is confident that the material is developed appropriately and is ready for pitching.

If you do not already have representation, the best way to find a lawyer or an agent is through recommendations. Speak to other artists or producers who can lead you in the right direction. If you do not have any connections, review the various animation journals (see the Appendix, "Animation Resources") or research online directories such as the Animation Industry Database (http://www.aidb.com) to help you identify potential candidates. In order to make sure that you are hiring the right person, consider interviewing a few people. Your agent or lawyer is ultimately a reflection of you and your style. Because they represent you to the people with whom you are going to be working, you want to be sure that the relationship is solid when the project begins development. General questions to ask potential representation include:

- How long have you been in the business?
- What is your business philosophy?
- What is your negotiation style?
- Could you provide me with a list of clients?
- What are your rates?
- What is your method of payment?

It is necessary to set up the terms of your relationship with your representation before you go forward with negotiations on your project. As a rule of thumb, agents take 10 percent of the fees they negotiate, and entertainment lawyers are paid an hourly fee ranging from $300 to $900 per hour. The advantage of hiring a lawyer who is paid on an hourly basis is that once you have paid the fees, there are no additional costs. Some lawyers will charge a flat fee for negotiating a contract; however, most prefer to work on a percentage basis, which typically translates to 5 percent of your entire deal. In this case, the lawyer's payment is similar to an agent who is entitled to a percentage of the *backend benefits*. (Backend is a percentage of profits you receive on items such as domestic and international sales, spin-off projects, and merchandising.) The advantage of this type of contract is that because your agent or lawyer shares the financial rewards with you, he or she is highly motivated to get you the best deal possible. Also, if you hire an agent, you do not need to pay any fees until the buyer pays you. Another plus to working with an agent is that he or she can be instrumental in finding new opportunities for you as executives call agents when looking for talent. When selecting an agency or a lawyer, also consider the pros and cons of how big a pool of talent they serve. If you are new to the business, sometimes it makes more sense to find a representative with fewer clients so that you don't get lost in the shuffle.

Standing Out in a Crowd

Julie Kane-Ritsch, Manager, The Gotham Group

Although success in the entertainment business hinges on a combination of talent, tenacity, and timing, we decide whether to represent an artist or writer by assessing the talent portion of the equation. The single most important factor we look for is a distinctive voice. The second most important factor is whether the potential client has solid interpersonal skills. Creators most likely to flourish in the business are those who can interact successfully with executives and inspire a crew.

How do we assess talent? For a writer, we look for a unique voice. The only way to evaluate a writer's voice is to see it on the page. Therefore, we prefer to read original scripts, with a backup of spec scripts in the genre in which the client wants to focus. The original script can be a play, a half-hour episode, an hour episode, an animated piece, or a feature, and can be in the comedy, family film, thriller, or drama genres. The piece must have the prerequisites of a solid structure, coherent plot, and great characters, but the attention-grabbing factor is in the story the writer chooses to tell and how the writer chooses to tell it. With a strong original sample or two in hand, the writer must also have spec scripts to show that he or she can mimic another creator's voice. If a writer wants to write for an animated comedy, action/comedy animated series, or live-action comedy, the writer needs spec scripts in each of these arenas. In short, write as much and as often as possible.

For an artist, we look for the combination of a unique visual style or a distinctive vision expressed through words and visuals. If an artist ultimately wants to create television series or direct a feature, the strongest calling card is a short film. Students frequently create a beautifully rendered world in their film projects but fail to couple it with a cohesive and compelling story. These works rarely land an artist representation or a job. Shorts that are well executed with a strong story are the most memorable and impressive. If the story has a strong comedic sense, so much the better, as the majority of work done in the animation field is not seriously dramatic in nature. If an artist wants to focus on opportunities in the purely visual realm, a portfolio showing a signature style is critical. If the artist also has a broader range of styles and can mimic others, these pieces should be showcased as well.

How do we assess interpersonal skills? It all comes down to the meeting. How at ease is she in a room? Can he pitch his ideas effectively? What do her professors or bosses say about her? Do his peers want to work with him again? Based on a meeting or two with the potential client and talking to bosses and co-workers, we can form a fairly good picture of the person's interpersonal skill set. This knowledge is essential in making a representation decision. Even if an artist or writer has all the talent in the world, animation is an incredibly collaborative process and, by necessity, requires constant interaction with others. An artist must be able to effectively deal with executives, who will be giving notes, setting schedules, and approving budget requests, and who will be involved in the day-to-day realities of production. Not only must an artist manage up to those people who will finance and distribute his or her work, but the artist must also manage down to inspire the confidence and creativity in a crew. Few people embody all of these skills equally, and part of our evaluation is whether we think these skills can be developed.

We enjoy nothing more than finding the creator who makes us laugh, who makes us shudder, or who makes us wonder at the worlds he or she creates. Once we find these creative individuals, our job is to tenaciously pursue their career objectives and to maximize the timing of opportunities presented to them in the business. It is an exciting and a rewarding collaboration in which we are privileged to participate.

Entering Negotiations

Patience is vital when heading into the negotiation process. After everyone has agreed that they would be interested in developing a property together, it goes into the world of "business affairs," where the attorneys work out the deal points to option the property. These negotiations can average three to nine months before all parties are in agreement and the contract is finalized. The exception to this rule would be if the project is on the "fast track" and someone in a decision-making position is interested enough in it to make it a top priority.

Many steps take place internally (meaning at the buyer's place of business) in order for everyone to agree to the costs involved in developing and producing a property. Once internal meetings take place, the buyer's business affairs person will make an offer to your representative. After the offer has been presented, it is up to you and your representative to counter the proposal. In order to do this, you need to think about what is important to you in the deal and what is not. After discussing this with your representative, he or she will go back to the buyer with a counteroffer. This back-and-forth negotiating process continues until everyone agrees to terms that are satisfactory to all parties.

A short-form contract is negotiated first, and then a long-form contract is drawn up. The short-form contract typically spells out the key deal points, including:

- Option fees
- Compensation
- Services to be rendered (that is, producing, writing, and so on)
- The term (the length of the option period, or how long the project can be kept at the studio before it is greenlit or released back into the possession of the producer)
- Backend percentages
- Credits
- Ownership
- Purchase price of the project once production is commenced
- Transmedia options (if applicable)

The long-form contract is a detailed legal document that includes all of the material stipulations negotiated in the short-form contract, as well as terms that are standard and customary in the industry. These conditions include representation and warranties, termination, indemnification, and force majeure, for example. In most cases, they are nonnegotiable terms. The studio's backend definition is usually attached as a rider to the long form. This type of rider is an additional contract that defines all of the complex details regarding the calculation process that a studio will undertake before sharing in the profits of a

successful project. This document is typically quite lengthy and is not usually written in a way that is simple to negotiate or easily understood. Unless you have ample resources, you will need to determine whether to spend the money to have someone review this material. You will also need to assess whether you have the clout in terms of your personal or your property's perceived value to shift the definition provided by the studio in a way that will fiscally benefit you and offset the investment to do this.

When negotiating your deal, be realistic in your expectations. You are probably not going to get everything on your wish list. Negotiating entails compromise. Your representative should be able to provide you with current market rates as a frame of reference. By thoroughly considering all options offered, you should be able to make educated decisions as you forge through this process. Various factors—including your experience, the buyer's policies, standard negotiation practices, and the studio precedents—can place the final results somewhat out of your control. It is essential that you feel satisfied enough with the deal so that you can work with enthusiasm on the development of the project. However, try to be flexible, and when you do give in on a point, let it go and move on. It is important to preserve the relationship and keep good will intact on the part of your buyer. After all, once the negotiations are completed, you will be working together on the same team.

Once agreements have been signed, development can begin.

4

THE CORE TEAM

An Overview of the Core Team

When you are taking the first steps to start an animated project, a select number of staff members need to be in place prior to the start of production. This skeletal group is what we call the *core team.* In most cases, the producer is the central person, pulling this team together based on the fiscal and creative needs of the project. The formation of the core team typically starts during the development phase with the initial creative group, which includes:

- Producer(s)
- Writer
- Creator/originator of the concept

As the project gets ready for further development into the story and the visual realm, it is necessary to add the following members to the core team:

- Director(s)
- Visual effects supervisor (if applicable)
- Production designer/art director
- Visual development artists
- Stereoscopic supervisor (if applicable)

Pending the size and scale of your production, it is also important to loop in personnel handling recruiting, legal and business affairs, human resources, accounting, training, and technology. In larger studios, some of these individuals may already be on staff, in which case the producer brings them into the mix as necessary. Based on the scope of the project, budget limitations, and the expertise of the producer, he or she can personally take on some of these roles while delegating others. For example, a common practice in a boutique studio is for the producer to fulfill all human resources duties, such as negotiating fees with new hires and facilitating personnel issues.

Each individual on the core team plays a significant role in getting a production up and running. On a feature production with a larger budget, a typical example of this process is as

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follows: the project has become solidified in terms of script and the overall art direction concept. It is 'greenlit' to proceed further into the pre-production stage. Next a director, if he or she is not already attached, needs to be hired to guide its visual development and to collaborate on the story with the producer, buyer/executive, and writer. The recruiter helps identify potential directors. The producer interviews all candidates and, in partnership with the buyer/executive, makes a final selection. The legal and business affairs departments negotiate the director's deal. Once on board, human resources coordinates the director's orientation and fills out the start-up paperwork. The production accountant processes his or her payment. The director works with the recruiters to cast and hire the most appropriate visual development and storyboard artists. If necessary to bolster the artistic team when there's a shortage of artists, the recruiting department scouts fresh talent and the training group starts organizing classes for the new hires. The technology group is instrumental in developing the production strategy and pipeline as well as researching and developing the tools to create the look of the project. All of these steps are overseen and managed by the producer.

The Role of the Director

The director is the primary storyteller on a project. He or she is responsible for facilitating the creative vision for the project. The director also guides the style of the animation. In this position, he or she has to be able to communicate his or her thoughts effectively and make certain that both the artistic and key administrative members of the production team understand this vision. Regardless of the budget and scope of a production, the director must always consider his or her creative goals in tandem with the project's fiscal parameters. It is typically only a director that can best be described as an *auteur* (an artist with an established body of critically successful work) who can singularly pursue his/her own personal vision. Unless they are funding the project themselves, this level of control by a director is rare.

The director and producer collaborate with the recruiting team to select artists. Once hired, the director plays the role of the "pied piper" as he or she guides these artists into this new imaginary world. He or she casts the artists according to their specific strengths, handing out assignments, reviewing their work, and providing consistent feedback throughout the development process. One of the director's top priorities is to put together a style guide that best illustrates the look of the project.

(See Chapter 8, "Pre-production," for more information on the visual style guide.) The director generally works with a production designer or art director in developing and designing the style guide, and this team oversees the visual development artists. Typically, there is first an exploratory phase, and the artists are given as much creative latitude and freedom as possible. This process enables the director to examine a wide array of possible visual choices and select the look that best matches the story content as well as the production budget and schedule.

As the style becomes more solidified, the director gets more specific with notes in order to finalize the look of the project. During pre-production, it is the director's job to give constructive criticism and notes on all of the various visual elements designed, as well as on the storyboarding. The creative executives may also have notes that the director must find ways to implement. The feedback to the artists could be either verbal or visual. Some directors can communicate more clearly by drawing or making corrections on sketches.

Once the project is ready for production, the director is in charge of handing out assignments, either directly or through department supervisors, as well as viewing and approving all artwork generated by the in-house artists and freelancers. During the casting and recording of a project, the director is involved in all steps of the process including choosing and recording the actors. Depending on the director's experience and comfort level, he or she may direct the voice talent himself or herself or choose to work with a voice director. In terms of music, the director and the composer collaborate to explore themes and choose a style. Throughout post-production, the director continues to lead the team by articulating the overall vision for the project to such staff members as the sound designer, dialogue editor, video editors, and colorists. (For more information on the duties of the director, see a detailed list below. Also see Chapter 8, "Pre-production," Chapter 9, "Production," and Chapter 10, "Post-production.")

The best directors are able to easily amalgamate the two distinctly different worlds of words and images. An ideal director is highly creative, articulate, resourceful, and able to lead his or her artistic team through the thick and thin of production. The most important asset for a director is to know what it is that he or she is looking for and to be able to communicate that vision to the crew. Artists thrive when working for a leader who is able to appropriately cast the artistic assignments and can draw out their best work through insightful criticism. Ideally, he or she should serve as a constant source of inspiration for the production team.

Given that the director is an intrinsic part of every step of the process, he or she should be hired as early as possible and have

input on the script, schedule, and budget. By involving the director at an early stage, he or she can determine how to tell the story while getting the highest quality animation based on the style and financial stipulations of the production. However, hiring a director early may not always be possible. Although a feature film project generally recruits a director during development, often a television director is handed the final script and has to start production immediately. Typically, time and budget restrictions leave little room for the television director to develop the project further.

On television productions, in those cases in which an executive producer is in charge, the role of director is not as all-encompassing as described previously. In this workflow, the director's job is to ensure that the executive producer's overall creative vision is understood and that the pre-production artistic team follows through on it. The director supervises the artists and reviews all creative stages, giving input and implementing creative executives' notes throughout the pre-production process. They may or may not be involved in production and post-production, which may be handled directly by the executive producer or a supervising director if there are multiple directors.

Due to the sheer volume of work, animated feature film projects are most often helmed by two directors. This structure is usually set up to expedite the production process and can work in several ways. One system is to simply divide the sequences between the directors. Another approach is to assign different departments to each director based on his or her strengths. Yet another commonly practiced system is to divide the sequences between four or five directors who primarily focus on the acting or animation. These directors are called *sequence directors*. In this case, there may be one overall supervising director who oversees the work of the sequence directors to make sure that the story and animation work in their entirety. This same system can also be used on series production, for which there may be several episodic directors led by one supervising director.

A great producing and directing team is a flexible one. By respecting each other's roles and goals, there is a healthy friction between the producer and director. The producer's job is to facilitate the fulfillment of the aesthetic goals for the project. The director in essence pushes the limits of the project creatively, and the producer does all that he or she can to help achieve these goals while pulling back on the reins when necessary. It is key that when problems arise, the director and producer work as a cohesive unit to find solutions. Together, they must continually motivate their team. They should communicate to their crew on a consistent basis, ensuring that everyone understands the project's creative goals as well as its time and budgetary restrictions. Sharing pertinent information with the crew enables them to feel invested and eager to do their best work.

Director's Responsibilities

Based on the production's budget and schedule, and the skills and experience of the director(s), he or she may take on all or a combination of the duties listed here. Please note that when we refer to the executives, we are addressing the individual(s) responsible for overseeing and/or funding the production. (For more information on the specific production steps noted here, see Chapter 8, "Pre-production," Chapter 9, "Production," and Chapter 10, "Post-production.")

1. Developing and completing the script in collaboration with the writer, the storyboard artists, the producer, and the buyer/executive.
2. Communicating with the producer and the buyer/executive in regard to all artistic developments.
3. Incorporating creative notes given by the producer and the buyer/executive.
4. Communicating with the production designer and/or art director regarding stylistic choices and the color scheme selected.
5. Collaborating with the visual effects supervisor (if applicable) to ensure that the artistic goals are achievable in the final format and within the production's financial scope.
6. Understanding and giving input on the project's final budget and schedule.
7. Selecting, approving, and overseeing all key artistic staff and department supervisors in collaboration with the producer.
8. Casting and/or directing voice talent in collaboration with the producer and the buyer/executive.
9. Suggesting and giving input on choice of musical talent, including the composer, lyricist, and vocalist, in collaboration with the producer and the buyer/executive.
10. Coordinating efforts with the associate producer and/or production manager, visual effects supervisor, and/or department supervisors to make shots less time-consuming and more cost-effective, when applicable.
11. Selecting and approving outside production studios in collaboration with the producer.
12. Developing and approving the style guide for viewing and signoff by the producer and the buyer/executive.
13. Approving look development and final color/surface treatment.
14. Understanding and agreeing to creative checkpoints with the producer and the buyer/executive.
15. Approving storyboards for viewing and signoff by the producer and the buyer/executive.
16. Creating and approving the story reel/animatic for viewing and signoff by the producer and the buyer/executive.

17. Evaluating the pre-visualization work with department supervisors, artistic leads, and members of the production team.
18. Approving all key production steps.
19. Approving final color and signoff by the producer.
20. Editing the picture with the editor and producer.
21. Delivering the final cut.
22. Giving input on the selection of the post-production facility.
23. "Spotting" sound effects and music with the producer.
24. Supervising ADR with the producer.
25. Supervising the music recording sessions with the producer.
26. Supervising the final mix session with the producer.
27. Determining the look of the credit reel and reviewing final credit listings with the producer.
28. Reviewing and final approval of all post-production outputs with the producer for sign-off by the buyer/executive.
29. Availability for press and marketing requirements in support of the project, including but not limited to personal appearances at film festivals, participation in press junkets and other interview opportunities, and the creation of DVD commentary tracks and other bonus materials.

There are many areas in which the director's and the producer's duties overlap. Here again, it is necessary to note the importance of the synchronicity between the director and the producer. Establishing an understanding of the director's responsibilities from the outset is therefore critical.

Visual Effects Supervisor

The visual effects supervisor holds the key to achieving the desired look in a computer-generated film. Partnering with the producer and the director, this individual is tasked with delivering the creative vision for the project to the screen while using the latest technology and artistic talent. He or she must have a balanced perspective on the project's components in order to create effective pipelines for element creation and shot production while adhering to the production budget. A vast knowledge of hardware and software technology and compatibility, plus a keen awareness of resource planning, artistic management, and problem solving, are all required for this role. To sum up: the primary goals of the visual effects supervisor are to materialize optimal creative visuals and maximize production efficiency while maintaining the ability to sail smoothly as pressure inevitably adds up.

As early in development as feasible, the visual effects supervisor may assign computer graphics (CG). While the visual effects supervisor is responsible for achieving the look and the desired

asset behavior on a CG project, the CG supervisor's job is to make certain that it is all technically achievable within the parameters of the production pipeline. Collaborating with the artists focused on modeling, rigging, and look development, he or she plays a central role in facilitating the technical requirements for the creation of the assets and their successful integration in the shots. Starting with shot setup through final delivery, the CG supervisor's technical expertise is critical to designing a fully functional and efficient production pipeline.

Production Designer/Art Director

As a general practice throughout the industry, the production designer works closely with both the director and visual effects supervisor (if applicable) to envision the entire look of the project, overseeing the design of every character and every element in every scene. This individual must have a strong understanding of visual communication in order to effectively create the best conceivable style and shape language for the project. Early in the process, the production designer should collaborate with the art director to develop a color script for the project, which consists of color palettes for characters and environments, and color key images of the primary locations in order to convey the proper mood and atmosphere for each sequence. The production designer might move off a project once all elements are in production, but the art director generally stays with the show through post-production approvals to ensure the color quality and consistency in all outputs.

It should also be noted that the titles "production designer" and "art director" have very different interpretations throughout the industry, encompassing a wide variety of responsibilities between them. A project may have room for one or the other or both of these roles, and seniority between the two titles may vary as well.

Visual Development Artists

Conceptual artists are commonly referred to as visual development artists, given that it is their job to conceive the overall look and style of the project under the guidance of the director and production designer/art director. For the core team, a group of artists are selected who have a strong aptitude for character and location design along with color styling. (See Chapter 5, "The Development Process," for further information on this topic.)

Being both prolific and flexible are necessary attributes for these artists. After all, coming up with material that is both fresh and has strong entertainment value is not a simple task. Out of a hundred drawings, there may be only one that is close to the target. The artistic development of a project is an exploratory process that involves searching for the right style and treatment. Building on the vision of the director and the producer, and under the guidance of the production designer/art director (and visual effects supervisor as the case may be), the visual development artists create the main concept for the project, which is followed by the rest of the crew. Depending on the size of the studio, these artists may be on staff for features or they are often hired on a freelance, as-needed basis for lower-budget projects.

Stereoscopic Supervisor

Creating a film that can be presented in a stereoscopic medium requires expert advice early in its development. Having a lead who is an authority in this field on hand will allow you to take full advantage of shot setup and execution both creatively and technically while preventing complications further down the production pipeline. The stereoscopic supervisor helps guide the layout pre-visualization team in translating storyboards into a more detailed visual direction. He or she can suggest camera lens and placement to comprise an ideal spatial composition. This supervisor can watch the frame line during super-stereo "popping off the screen" shots to avoid visual confusion; additionally, he or she can adjust composition to best achieve the desired stereo effect for the audience. The stereoscopic supervisor supports budgeting and scheduling efforts by evaluating the visual density of sequences and determining shot complexity. He or she advises editorial efforts, watching out for cuts that may be too fast to be properly read when amplified in intensity and size in a stereoscopic presentation. In later phases of production, the stereoscopic supervisor is key to facilitating an even-flowing, rich-looking project by monitoring the use of effects, rotoscoping, or matte painting—which can all be problematic in this medium. Larger studios generally have a stereoscopic supervisor on staff; independent productions may seek the talents of freelance experts through organizations such as the Stereo Club of Southern California (www.la3dclub.com) or the National Stereoscopic Association (www.stereoview.org).

Recruiting

Not every studio has the luxury of having a recruiting staff. In some cases, freelance recruiters may be hired or the producers

may have recruiting added to their list of duties. Based on the budget and schedule, the producer first determines the size of the crew needed. In collaboration with human resources, he or she also generates a detailed list of requirements for specific job experiences in each category. The recruiting department is responsible for finding the best candidates available for creative, production, and administrative jobs. Methods of recruiting include postings on job sites, animation related blogs, discussion forums on the Internet, advertising in the trades, and contacting local unions. Another effective means of recruiting is hosting booths at animation festivals or other related arts events such as comic book conventions and special effects/computer graphics conferences such as SIGGRAPH. At these forums, artists can view conceptual artwork created for future projects at each studio and have their portfolios evaluated at the same time. Some studios go through the expense of throwing parties during festivals and conferences so that artists can get to know the studio executives, director/producer teams, and department supervisors—and vice versa. Most importantly, recruiters maintain well-organized databases of all potential candidates in order to address promptly the staffing needs of a show at any given phase of production.

Artists and production personnel who are interested in an advertised position email their résumés and URLs for online portfolios or clip reels to the recruiting department. This office sets up artistic candidate reviews by a committee that generally consists of the director, the producer, the production designer and/or art director, the visual effects supervisor, and the appropriate department heads. Résumés for production assistants and coordinators are screened and then passed along to the producer and the production manager, who select the qualified candidates and conduct interviews with them.

Once a decision has been made to hire an artist or a production staff member, additional discussions are set up to establish availability, salary, start date, and benefits. Extra considerations should be made when discussing candidates that need to be relocated for work, especially when they are in foreign countries because the immigration process is a costly and lengthy one. It is good to note that this type of arrangement should be made only for an artist who is not needed immediately and who can be utilized on a long-term basis or on a number of different projects.

In cases where the option to “pass” on the portfolio or résumé is exercised, the recruiting department keeps a record of the selection committee’s or the producer and production manager’s evaluations in their database. Ideally, the recruiting team keeps digital files of the most promising artists’ portfolios so that when there is an opening on a project, it is easy for the core team to do a quick review of the potential candidates to find the best match.

Sourcing and Courting: The Adventure of Recruiting

Lala Gavgavian, Director of HR/Recruiting and Talent Development, Digital Domain

The success of any project starts with building its foundation—the team that is going to get it produced. The ability to identify, attract, cast, and retain top talent for a production is always an interesting adventure for both the company and employee. A recruiter is the person typically responsible for helping the producer build his or her team. Recruiters can be in-house employees or freelancers. I have been a recruiter for most of my career. For me, it is not a nine-to-five job but an ongoing and exciting passion that runs through my brain at all hours of the day or night. There is nothing more thrilling than uncovering great talent, pairing them with the right people, and watching them create something special. In order to be successful, I see it as my job to have my finger on the pulse of where all the talent lies in our industry. Keeping up with the trades, sending a note of congratulations when the talent has won an award or achieved a milestone, and so on are great ways of developing or keeping these important connections.

After the producer identifies the positions required, we work together to determine areas of responsibilities for the roles and any necessary skills. Once solidified, the search for the perfect candidate begins! Finding that perfect fit is truly an art. There are many ways to source talent. Posting on a company's home website is a typical first step. If the role is going to be hard to identify, paying for postings on industry websites may be another option to consider. Colleague connections and word of mouth is also a great method. Sometimes an introduction can happen by chance (at an industry event or networking) or very randomly (at a restaurant, elevator, or the gym.).

For those of you that are potential candidates applying for a job, here is some advice to keep in mind. Do your research, and have patience. Research the company you are applying for. Don't go into a job interview and compliment the studio on the achievement of a product that their competitor accomplished. Such types of misinformation can leave a poor impression about how serious you are as a candidate. As you are probably competing for the position, the candidate who took the time to figure out who exactly they are interviewing with has an automatic leg up on you. As a rule, do not expect to hear back from a recruiter immediately. Keep in mind that most recruiters are rifling through an average of 100 resumes/reels/portfolios for every job that is open. Don't take it personally that you haven't gotten a response in a timely manner and be very thoughtful about your follow-up strategy. Phoning a recruiter more than one time to "check in on your candidacy" sometimes ends up getting translated into a negative perception: "the potential employee is 'overly anxious and insecure.'" If you are a good fit for a job, rest assured that you will most certainly hear back from the company.

Once I have identified a candidate whom the producer is happy with, the courting phase begins. Like any relationship, there is a "get to know" each other phase, somewhat akin to dating, that the new relationship transitions into. If you are the person being courted, something to keep in mind during this stage is that the recruiter is assessing everything you do or say. It is their job to determine whether you are or are not going to be a good fit for a team. With that in mind, I highly recommend that you be conscious and aware with regards to what you say and how you present yourself.

Another factor to consider as the candidate when job hunting is social media and the significant role it now plays. With the onset of MySpace, LinkedIn, Facebook, and Twitter, finding a job and having visibility for a potential employer has proven to be the single most innovative technology to propel the headhunt and job search into a whole new realm. This, of course, is a double-edged sword, as social media can either make or break your chances of obtaining a job. Keep in mind that "connecting" or "friending" with a prospective employer or representative of the company you are talking to will bring lots of visibility into to your day-to-day behavior. If used in a smart way, your profile on any of these social media forums could provide you with positive insights into you as a potential employee. If, however, you use your social

media as a forum to tell the world where you are every two minutes, or how much you drank over the weekend and the physical result of that, sharing may not be the wisest choice.

One last item to consider when interviewing for a job is that recruiters actively read posts when researching a candidate. We will almost always "Google" your name and do a work-related search in order see what comes back, such as project credits or any other critical information, positive or negative. I once interviewed a woman who signed an NDA for a highly confidential project that we were considering her for. Once the interview ended, she left our offices and immediately proceeded to post a comment on Facebook. She posted that she had just left the company and that she thought she had the job in the bag. She then proceeded to not only name the project but to give details about it. Hmmm . . . you can only imagine where that ended up—certainly not as she had expected!

When I am ready to make an offer to someone, it is not always as straightforward as checking references and making an offer. I have at times met the perfect candidates, but they weren't available. For example, they may have already been committed by contract to another company. In such cases, what's a recruiter to do? Although your perfect candidate may not be available right now, there will be a day that he or she goes back on the market, and you will have established that front-line relationship. My strategy is to make it my business to stay in touch for as long as it is required to find the right time to bring the person in. I have found on many occasions that thanks to this groundwork, I am typically the first phone call they make when they are ready to make a leap.

The key to success for both recruiter and candidate is to make sure to do your due diligence to ensure that the fit is right. There is nothing more frustrating for everyone involved if it isn't. When it is a good match, however, there is no limit to the great things that can be accomplished and the satisfaction everyone feels as a new hire settles into his or her new role and begins to make a difference.

Legal and Business Affairs Department(s)

Depending on the structure of a studio, legal and business affairs may be two separate entities or combined into one department. The producer works closely with the legal and business affairs executives and creative and/or production executives when hiring key personnel who need to be put under contract, such as producers, directors, department leads, line producers, associate producers, writers, artists, and voice actors. The legal and business affairs departments are also involved in any deals with subcontract studios and outside facilities such as a post-production house. The project's executive or the producer is responsible for giving this department the fiscal parameters under which they can put together a deal. Furthermore, the producer outlines the roles and responsibilities of all individuals under contract. By delineating duties from the start, all parties are made aware of the expectations of the job, thereby avoiding possible future misunderstandings. Once a project is in production, the producer uses this department for advice and guidance on business, personnel and, when applicable, union issues. The producer provides this department with

production materials such as the script and artwork to review for legal notes and clearance at specific checkpoints throughout the process. It is the producer's responsibility to make certain that these notes are implemented to avoid any potential problems once the project is complete.

It is the job of the business affairs executive to make deals for a project by negotiating the short-form contracts. (See Chapter 3, "How to Identify and Sell Projects," for more information on contracts.) Throughout the negotiations, business affairs executives ensure that the overall business philosophies and strategies of their company are followed. All deals created need to be consistent with the studio's corporate policies and the project's or production company's fiscal parameters. Another objective is to make sure that new deals are in line with contracts that have been previously established. Once the key deal points have been locked down by the business affairs executive, the baton is handed over to the legal executive. This executive is responsible for negotiating all of the finer deal points that spell out the final agreement or long-form contract.

The main duties fulfilled by the legal and business affairs and department are as follows:

1. Optioning material (purchase of intellectual property) and determining all deal points.
2. Handling title clearance (establishing chain of titles and clearing ownership of property).
3. Handling copyright issues (identifying and clearing any copyright issues).
4. Registering the title of properties with applicable agencies (e.g., the Motion Picture Association of America [MPAA]).
5. Negotiating talent agreements, including directors, producers, writers, creators, artists, actors, studio facilities, creative and technical consultants, musicians and composers, subcontracting studios, and any other person/company that may require a contract.
6. Negotiating and drafting short-form and long-form contracts.
7. Coordinating writers' and any freelance staff payments with the payroll department as noted in each individual's contractual agreement.
8. Functioning as a liaison between production, human resources, and the union, if applicable.
9. Negotiating union agreements.
10. Collaborating in the development and implementation of all studio policies such as hiring issues, benefits, holidays, overtime payment, and termination.
11. Obtaining visas and work permits for those artists relocating from another country.

12. Maintaining a complete list of all contracted employees/consultants and their pertinent information, such as option notification and contractual pickup dates.
13. Checking all references to names, products, or brands that need to be cleared.
14. Obtaining music clearance (verifying that they are public property and negotiating fees to be paid for copyrighted material).
15. Compiling contractual screen credits.
16. Reviewing and signing off on final screen credits.
17. Verifying accuracy of promotional material in connection with details of contracts, such as size and placement of credits.

Human Resources

The human resources department is typically involved in the hiring of new employees. Working closely with the producer (and, when applicable, the recruiting department) regarding the terms of employment, they may handle communications and job offer negotiations. They are responsible for welcoming new artistic and administrative staff and integrating them into the studio. Typically, on the first day of starting a job, each employee attends an orientation meeting organized by human resources. At this meeting, new staff members fill out the startup paper work needed for payroll purposes. They are also informed of the studio's rules and regulations and receive important items such as identification cards and parking passes, if applicable.

Another equally important aspect of human resources is resolving interpersonal conflicts. In many cases, a producer can help solve issues. However, if the producer is not available or the matter needs an objective third party, human resources is responsible for this task. It is human resources' duty to make sure that the studio's philosophies and the Department of Labor's laws are followed by the production. In the case of studios that have an agreement with the local union, the human resources department oversees the implementation of union codes and employment guidelines. If there is ever a discrepancy between the studio's philosophical objectives and the rights of the employees, human resources is responsible for both finding and applying the appropriate solution. When necessary, human resources works closely with the producer and the business affairs and legal department to resolve any disputes.

The following list outlines the range of the human resources department's main responsibilities:

1. Creating job descriptions that fulfill production needs and adhere to labor laws.

2. Setting up interviews.
3. Setting up personnel reviews.
4. Hiring and negotiating salary with production personnel.
5. Processing all startup paper work, including W-4s, I-9s, and applicable job benefits materials.
6. Coordinating efforts with payroll for payment of full-time crewmembers.
7. Organizing accommodations and providing general information for artists relocated from other countries.
8. Tracking and administering salary parameters and annual raises.
9. Maintaining a database on the status of employees and studio headcount.
10. Dealing with disciplinary actions.
11. Ensuring that a healthy work environment is maintained, which may include the coordination of crew-bonding and morale-boosting events and amenities.
12. Handling all internal disputes.
13. Resolving discrepancies with payroll for payment of Motion Picture Health and Welfare Pension if the studio has an agreement with the local union.
14. Tracking and administering benefits such as life insurance, health benefits, and pension programs.
15. Conducting exit interviews.

Working with the Game Changers in an Ever-Changing Game

Don Hahn, Producer and Director, The Walt Disney Studios

In the game of animation, the producer's number-one priority is to assemble and maintain a world-class team that will create a movie of lasting quality. When people ask me what a producer does to successfully manage an animated film, the answer is deceptively simple: I hire the best people that I can find and then do exactly what they tell me to do. This group of experts covers the gamut of administration (human resources, legal, finance, recruiting, training), production (management on the project), and creative (director, production designer, other artists), and here are some thoughts on making the most of your team.

Clearly, the work of building a crew into a team is the most important job in managing a project, so start things off with your administrative partners by acknowledging the simple fact that the success of a production is based purely on the team of people cast to create the film. You are not casting a party: everyone doesn't have to get along all the time, but there does need to be respect between the team players. What is crucial is the expertise of the player, the management skill of the player, the candor of the player, and the ability of the player to push the team to a higher level. Recognize that the team is only as good as the weakest member, and you should be casting the film with the best you can afford: this is not a place to save money. You can certainly hire a "B"- or "C"-list editor, for example, but you will

suffer that choice for years to come and the cost of recruiting a better talent will fade from memory as you spend your way out of a mediocre situation.

As you line up your production management, a great philosophy to instill in these key players is: "Animation is not a traditional assembly line activity; it is much more like sports." You can prepare, train, and recruit the best team and set a game plan, but you have no control over the variables of the game. What you do have control over is how quickly you react to changes in the game and how prepared and conditioned you are to adjust to the new conditions and still play at your top level. Expect chaos and moments of indecision, and then train the management team how to react to the change; how to access, listen, plan, and refocus attention is the goal. If you want to set out a foolproof plan on paper and execute it perfectly, I can tell you right now: don't go into the animation business.

On the creative side, the director is the first crucial hire. He or she has three responsibilities: to articulate the vision and the story clearly to the crew, to give candid critiques, and to build morale around that vision. The storytelling and critiquing aspects of directing are obvious, but you might find it surprising that I included morale in the director's duties. The core team—and eventually the entire production crew—has to sustain the vision of the director over a period of years and has to believe where the director is taking them. There will always be frustration, debate, and disagreement on any film, but if the team can agree on supporting the director's vision of the film, the process will be easier and the result inevitably stronger. I've seen the opposite happen: the director has a creative vision that is completely out of sync with the team and the studio and no one can agree on what the film was. The crew showed up because it was a job, but it wasn't a passion. The project became more of a negotiated truce between director and studio than a good movie.

And here's a bit of advice for you to hold on to when you are in production and things seem to be going from bad to worse: manage your team's expectations and foster collaboration. Managing expectations during the making of the film can keep the crew focused during a long and often grueling production period. For example, most early screenings of a film are horrible. On *Who Framed Roger Rabbit?* we had an early audience preview screening where more than half of the audience walked out. For that matter, even *Beauty and the Beast* failed horribly in early screenings. But it's not over 'til it's over. The crew must keep in mind that early misfires are common. It's a need for concern but not a need for panic. As a producer, it's important for you to deflect panic and get people on the crew focused on the tasks ahead to make the film better.

To maximize your team's talents and investment in the project, I recommend that you solicit notes from the crew when you do a screening. It does two things: you will get a handful of genuinely useful notes from the fresh eyes that haven't seen the film before, and at the same time you will be building a sense of trust and team that is so important as the film goes in to the production crunch period. Create an atmosphere in which opinion is not only tolerated but also welcomed from every level. The director and producer have to be particularly open to this culture or it won't happen productively: they have to be willing to take the time to listen to dozens of ideas, some of them awful and some useful. This group critique culture, if done right, builds a tremendous amount of ownership between the filmmakers and the product. The director will still have to go back to his or her office and sort through the notes, because the final product is at its best when it's a single vision, but the culture of honest debate and creative critique is crucial for films to reach their highest point.

Although this is certainly an intimidating process for production management, this is the point at which their collaboration and "sports-oriented thinking" is greatly needed. They will want to hit the deadlines, and soliciting changes is completely counterintuitive to this. But going back to my earliest statement: the job is to deliver a film of the highest quality on budget and on schedule. A lot of times we as producers or managers abdicate the term "highest quality" and leave that part to the artists. Not true. If you don't carve out the times and the cultural permission to be critical, there is no incentive for the artist to do it. If you are always driving to inflexibly hit numbers, it shows that you haven't built in contingency for change and you are sending the message that schedule trumps quality. Both not good—and not the way to play the game.

Production Accounting

The production accountant functions as the producer's right-hand person by keeping track of every penny spent during production. It is the production accountant's job to be aware of and communicate the financial status of a production to the producer. In most cases, the production accountant reports to both the producer and the studio executive. In larger studios, the production accountant may work under the supervision of a production controller who oversees the accounting of a number of projects at the same time.

At the inception of a project, the producer and the production accountant work closely together to establish the details of the budget based on the schedule and the artistic needs of the production. The production accountant will ideally run multiple scenarios in order to help the producer decide on various staffing and scheduling options and to foresee potential financial ramifications, as workflow may shift while the project is in development or production. Once the project is greenlit, it is the responsibility of the production accountant to monitor the weekly progress of the production from a monetary point of view. The production accountant attends project meetings and is given pertinent production information on a consistent basis by the producer, director, the associate producer, the management crew, and the department supervisors in order to assess the status of the budget. This analysis is done through the generation of a cost report or an estimate of final costs (EFC). A cost report is a line-by-line breakdown of all costs incurred to date and the amount of money remaining in each category. It compares the actual work completed on the project versus the work to be done. (See Chapter 6, "The Production Plan," for more information on building the budget.)

By evaluating the various financial reports along with the schedule and status of production, the production accountant tracks expenditures. Under the guidance of the producer, the production accountant can determine areas in which there are savings as well as areas that may require additional funds. Together, the producer and the production accountant decide on where to move funds based on the creative and upcoming needs of the project. Even though the production accountant is not creatively involved in the project, it is imperative to keep him or her aware of all developments on the production. Unless the production accountant is informed on all revisions and issues that may delay the production, he or she will not be able to do the job effectively. It is the role of the production accountant to highlight or bring to the attention of the producer any potential problems that may affect the budget.

The production accountant is responsible for processing payroll, all purchases, and invoices. Timecards are signed by the production manager and/or the producer and are then forwarded to the production accountant to review and process for payroll. Once completed, paychecks are prepared for staff members and freelancers. Every purchase, ranging from small items paid for from petty cash to acquiring big-ticket items such as purchasing software licenses, require the approval of the producer. In the case of larger items and services rendered (such as voice recording at outside facilities) a purchase order (PO) is issued. A PO states the purchase or service, its projected cost, and the line item to which the cost should be attributed within the budget. A PO is used as a check and balance system to manage costs. When invoices are received, the production accountant uses the PO to match up the invoice, cross-checking that the amount charged doesn't exceed the amount the producer originally signed off on. If it does, the production accountant informs the producer, who makes a decision as to how to proceed. After the invoices are approved, these costs are entered into the accounting system and checks are cut.

Training

Larger studios that have a long-term commitment to producing animation often invest in a training department. This group works with the recruiting team and producers to identify the training needs of the studio. The immediate goal is to ensure that all artists are adept at using the current toolset for a particular production pipeline, and longer-term goals include the education of future artists brought in as interns. Training programs involve lessons led by in-house talent as well as outside animation and technology professionals. Offering workshops on the latest technological advancements allows the studio to remain competitive in the rapidly changing world of animation. The training department may also organize ongoing classes, such as life drawing and improvisation courses, to regularly refresh the experience of more tenured crewmembers.

Keeping the artists inspired and excited about the project is a very important priority for the producer. Together with the training department, the producer can organize workshops, lectures, and outings that allow the staff to hone their artistic skills and learn more about the subject matter of a project. Equally important is creating workshops in which the staff can cross-train and learn about what other team members do. This approach enables the crew to have a deeper understanding of the thinking and the skills that go into job categories other than their own.

The Technology Department

The technology department is responsible for providing and maintaining computer hardware and software for the artistic and administrative staff. Depending on the size of the studio and the extent of digital production to be used on the project, this department can be just a handful of people or hundreds of staff members. Whether the project will be fully digital or have only moderate use of the computer, the producer and the director should meet with the technology group as early as possible. This meeting helps to pinpoint the specific needs of the show and set realistic goals that can be met within the budget and schedule. Following the producer's guidelines, this team is responsible for identifying equipment, negotiating deals, maintaining all contracts and licenses for hardware and software purchased, and setting up and supporting the production pipeline. Because technology is so multifaceted, the group is generally divided into separate departments rather than falling under a single one. Areas covered in technology include systems administration, production services, research and development, and archiving.

Systems Administration

This division of the technology department is responsible for purchasing, installing, and maintaining the necessary hardware for the studio: everything from laptops to digital projectors, servers, and render farms falls within this jurisdiction. The expertise of this department is crucial in all decisions involving power, space, efficiency, and compatibility of all machines utilized in a production facility.

The systems administration group also licenses, manages, and supports all "off-the-shelf" software packages and ensures their capability to interface with each other. From the organization of digital storyboards to the tracking of shot progress and the delivery of final frame images, systems administrators oversee the operation and provide assistance for both artistic and management teams.

On projects that use subcontractors, it is essential that the systems administration group be involved in establishing efficient workflow between the in-house and external parties. This group should ensure that the two sides use either the same or compatible equipment and software, and they can help evaluate whether the cost of installing the machinery and training the staff at the subcontractor's studio makes fiscal sense versus doing the work in-house or possibly finding another outside source with compatible systems. A significant financial investment may be wise only when there is a long-term commitment with the subcontracting artist or studio.

Research and Development

The research and development group oversees the development of proprietary software to handle particular production needs as a stand-alone part of the pipeline or as a bridge between licensed software packages. Their efforts can make a production more efficient and streamlined and can keep a studio more competitive by staying in touch with the latest technology and evaluating the most recent hardware and software options available within the industry.

Production Services

In some studios, the production services group sets up and manages production databases, production tracking systems, and disk space. They also run backups, handle dailies setups, and facilitate the on-lining and off-lining of materials. In other studios, these responsibilities are handled within a production—typically on a department-by-department basis—and supervised at the global level by the technology group.

Digital Archiving

The digital archiving group oversees the storage of elements for short- and long-term access. Certain assets should be archived to address future needs, such as the creation of sequels and ancillary materials. This group helps determine what makes sense to archive versus what can be better recreated in the future using more current software and technology. In other words, cost considerations should be factored in when deciding whether it is more expensive to keep an old version of software "alive" than it is to take the reference art and recreate a character, effect, or environment in the latest version of said software or perhaps plan to start fresh in an entirely different software package. The digital archiving group maintains a detailed catalog of all elements in the archives and manages a digital image interface for users to access and retrieve files as needed.

5

THE DEVELOPMENT PROCESS

Development Process Overview

The development phase is when the creative foundation for a project is solidified through visual and written materials. Inspired by an idea or a vision, writers and artists strive to capture the unknown. To some, it is a seemingly simple process; however, it can become much more involved than one might imagine. There are no hard and fast rules to development. The approach taken is dictated by the property, its source, and the individuals initially attached to it, such as the creator (referred to in this chapter as the seller) and the buyer. Putting together a strong development team to bring the concept to life is one of the most important steps in shaping a successful project. Although it can be challenging to match up key players who have a creative chemistry, when the right people are in place, the potential of a project is limitless.

The Role of the Producer During Development

Even if the producer is not the driving force behind a project from its inception (such as when a studio hires a producer to work on a project it already owns), it is important for him or her to be involved in the development phase as early as possible. How a project is shaped and launched is entirely dependent on its producer. Factors that directly influence this process are the story content and the project's intended budget and schedule. During the script writing process, one of the producer's primary duties is to ensure that the project is suitable for animation. Collaborating closely with a writer, the producer's goal is to flesh out as much of the story as possible so that the script can be considered "locked" prior to start of production. Partnered with the director and working with a select group of conceptual artists, the producer helps guide the creative efforts to establish an appropriate style and quality of animation. In addition to overseeing the writing and visual development

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process, it is important to keep the buyer satisfied. Just because a property is in development, there are no guarantees that it will get produced. It is the producer's job to keep the buyer completely confident that his or her investment is a sound business decision so that the funds can be put in place and production can be launched.

In exploring the possible paths to developing a project, the producer needs to assess its strengths and weaknesses. If the property is based on written material, the text may be used to create the visuals. On the other hand, it could be the reverse, whereby the visuals drive the script and a writer needs to be identified. It may be, however, that the project is based on a property that already has both elements in place, such as a comic book. In this case, the person attached to the property and/or its creator may act solely as a consultant or may be responsible for either the visual or written material, depending on his or her expertise. In all of the possible scenarios, the producer works with the creative executive, who is typically the representative of the buyer and the seller, to find and interview the appropriate candidates to help develop the project.

Independent studios and projects with lower budgets generally use freelance artists for visual development. When negotiating and hiring any member of the creative team, the producer needs to be clear as to whether they are "attaching" the talent to the project or simply bringing them on as a "work for hire." If someone is integral to the project's success and is instrumental in selling it—such as an "A-list" writer or top director—the producer will probably attach him or her to the project, which ensures that the talent is available should the show go forward. The producer should be highly discerning, however, when attaching staff this early in the process. If the talent is not crucial to the project, they should be hired only for their specific services. If for example, the buyer is not impressed with a writer's output or an artist's work, yet that individual is attached to the property, this predicament could hinder the project getting picked up for production. Another item for the producer to consider before hiring anyone for the duration of the project is how easy or difficult it is to work with him or her. Starting with a freelance-type relationship is a great way of gaining insight into how someone works. Getting a project produced is challenging enough without having to deal with personality conflicts.

Projects developed in the larger animation studios are generally created by staff producers, directors, visual effects supervisors, and visual development artists. Writers may or may not be on staff. These studios typically have a number of artists who focus solely on conceptual artwork. As the lead storyteller, the director guides the artist(s) towards his or her vision. If no talent is initially attached to the project, the producer selects visual development artists, and possibly a director, to establish the look of the show. (See Chapter 4, "The Core Team," for more

information on this process.) In cases in which the director is already on board, he or she works with the producer to review portfolios and find the appropriate talent for the project.

In television, unlike features, the overall creative visionary on a project is usually the executive producer, who is often referred to as a *showrunner*. Note that if the property is the writer's concept, the writer typically plays the role of the executive producer. It is his or her responsibility to oversee the storytelling process and the show's visual development.

On both television and feature projects, the producer creates two important schedules. In cooperation with the writer, he or she generates a schedule based on the key milestones of the script as it evolves from premise to final draft. The writer receives creative notes from the producer, the director, the seller, and the creative executives at every stage of the scripting process. The purpose of this input is to make sure that the script is meeting the project's creative objectives from a narrative perspective as well as in terms of character development. On the visual front, the producer typically negotiates deals with the artists and creates a schedule for visual development. Working closely with the executive producer, the director, the seller, and the creative executive, the producer makes sure that the notes are addressed by the artists and that they are staying on track. If not, he or she reevaluates the scheduled plan and determines the timing of the next steps.

It falls on the producer's shoulders to pace development appropriately, allowing creativity to thrive and at the same time meeting long-term objectives. Although it is essential to adhere to schedules in production, applying strict deadlines to development can at times hinder the creative process. The producer has the balancing act of ensuring that the creative team has enough time and money to achieve their artistic goals and that the quality of artwork generated is suitable for production. As a result, the producer has to use his or her intuition to know when to push and when not to push. An artist's worst fear is working with a producer who has an assembly line approach towards artistic endeavors. Yet how can network or studio delivery deadlines be met if there is no schedule?

Besides keeping the creative team moving forward, another key responsibility for the producer is to keep the buyer and other significant players excited and enthusiastic about the future product. For example, one approach that can greatly help the buyer clearly envision a CG project, is taking the main characters and key locations into early surfacing and lighting tests. If the budget allows these additional steps, then the buyer can get fully behind the project and literally visualize why it is worth pursuing. It is important for all parties involved to understand that a concept in development can take many months—or even several years—before it is ready to be greenlit, as it is constantly changing and evolving into the best television show or feature production it can be.

As a project begins to take shape and the characters are more defined and developed, a producer must look at it in terms of applications in other mediums. Given today's transmedia marketplace, a property that has the legs to stand in multiple platforms—comprised of suitable content for games, mobiles and apps—has a stronger chance of succeeding, as it may start out in a smaller format and grow into a brand. In the case of a larger studio, a producer needs to begin to plant seeds and build support to help launch his or her project. Working with other divisions or ancillary entities within the company—such as the marketing department, consumer products, and online and music groups—it is important to engage them as possible stakeholders who may in turn provide additional funds or materials in support of the project. If a property has transmedia potential, buyers are more likely to support it through development and production, as they can see other possible ancillary revenue streams that can help offset their risks.

One important final item to note prior to getting into the development process is confidentiality of material. Starting at this stage of the production, it is critical for the producer to establish ground rules safeguarding the project from piracy. Confidentiality policies and procedures typically apply to script, all forms of artwork, and software development and must be adhered to throughout production and post-production. It is wise to watermark all script copies printed, to place burn-ins on all digital outputs created, and to keep a log of who is given what in order to closely track the possession and distribution of such materials.

The Curious Art of Developing a Known Property

Ellen Cockrill, Senior Vice President of Animation, Universal Studios Home Entertainment Family Productions

Although creating an animated show from scratch is an exciting adventure, taking a well-known property and translating it into film or television is an intriguing journey as well. The first challenge is to identify what is loved about the property in its original format. It's a critical step because it will inform all the creative choices going forward. This process involves exploring the key elements of the property—characters, art direction, and stories—and figuring out how to best translate their magic into the new medium. Such was the case with our work bringing to television Curious George, the beloved book property created by Margret and H. A. Rey.

Characters: The two main characters, George and the Man with the Yellow Hat, are delicately balanced in the books and we were mindful to retain that balance in the television show. Our supervising director and head writer

both worked hard to ensure that George is always innocent in his actions so that he never comes off as a troublemaker or purposefully disobedient as he's following his curiosity and messing things up. This is what gives him his can-do spirit, keeping him sweet and full of charm. Likewise, we wanted to make the Man with the Yellow Hat an intelligent, lighthearted, and fully accepting "father" for George, even as he's witnessing George's chaos. Not only did we pursue this direction in the writing and directing, but we also searched for actors who could deliver just the right voice performances.

Because George doesn't speak an actual language, we needed to come up with alternative ways to keep him alive on screen. First, we made the book narrator an off-screen character, someone who could communicate George's point of view. However, we couldn't utilize as much narration as the books do, so we also incorporated "thought balloons" to visually portray some of George's thoughts. Finally, we had the writers not only script out all of George's actions and reactions but also his "chittered" dialogue. This gave our artists and our actor voicing George specific direction to work from. They then added their own terrific talents to bring George to life.

Art direction: To make an authentic translation of the book illustrations, our art director closely examined the color palette, shape vocabulary, line quality, use of shadow, and painting technique in the original work. He strictly adapted some of those design elements and strategically took liberties with others that might not play as well in the new medium. For instance, the book illustrations are done mainly with primary colors. In the animated show, we broadened the color palette but still attempted to create the sense that George's world is one of bright, primary hues. We also endeavored to use the art direction in a way that retained the books' timeless feel. This approach, hopefully, helped make the series "evergreen."

There was one design aspect of our show that required deep deliberation before proceeding into animation, and that was the interpretation of George's eye shape. In the books, George has simple "button" eyes, but when attempting to translate that look into animation, we realized that he was able to convey more expression and emotion when given a more detailed eye design with white surrounding his pupils. This change was weighed heavily, but when considered in combination with the fact that George does not speak in human language, eye design proved too valuable an animation tool to oversimplify.

Stories: Another essential aspect of development we considered was where the stories could logically go from where they left off in the books. We knew our curious little monkey character would lend himself to countless entertaining scenarios; it was one of the reasons Curious George was initially viewed as an outstanding property for adaptation. We realized his curiosity would also be a great means for introducing preschool audiences to basic math, science, and engineering principles. To develop our stories, we worked with preschool education specialists to come up with concepts that would be educational as well as entertaining. The specialists then continued to give helpful comments throughout production to make the episodes as enjoyable yet informative as possible.

In the versatile world of animation, imagination and creative analysis easily combine to create memorable experiences for fans of endearing characters, old and new. You just have to be curious enough about the development adventure to make the most of it!



Figure 5-1 *Curious George* (CG: ® & © 2010 Universal Studios and/or HMH. All Rights Reserved).

The Writing Process

The key to a successful project is a great script. You can have some of the most beautiful and complex animation in the world, but if the story doesn't work and the characters are not compelling, chances are that the show won't be either. In animation, there are several ways to approach scripting, depending on the genre, format, and length of the project. In the old days, most of the famous cartoon shorts were created directly from an outline to storyboard. Gags would be conceived in a room of artists bouncing ideas off each other. These ideas would then be pitched or acted out by the directors and/or animators. This approach enabled everyone to be spontaneous and come up with some classic comedy, and it is still a popular technique used for short-form projects. In terms of longer formats, once a script is available, it is common to hold brainstorming sessions with the story artists to come up with gags and/or solve story problems. Whatever the method used, the goal of the producer is to get the best writer, story boarding team and script possible.

Writer's Deals

You are finally ready to hire a professional writer to take the story idea to the next stage. How do you set that up? In the larger studio system, the business affairs department, with input from the creative executive and producer, negotiates the writer's contract. Rates paid depend on the type of project, budget, and the background experience and perceived value of the writer.

For a series, writers' fees can vary greatly for a traditional half-hour "Saturday morning" script versus a prime-time show. Feature scripts also range greatly in cost depending on the stature of the writer, his or her "quote" (the amount they received on their last project), and the number of writers brought in to work on the script throughout the development phase. It is standard that a writer is not expected to make less than his or her quote, and—depending on the nature of the project—the writer generally expects an increase in pay. It is also important to respect practices established by the Writer's Guild of America if the writer is a member of this group. If a studio is a member of the animation union, in-house writers are covered by that union. In such cases, writers can expect minimum scale rates. However, because these fees are considered low, scale would be an appropriate payment mostly for a first-time writer.

Each studio has its own standards and processes in place for payment if the writer is non-union. If the writer is union, payments must be paid per union rules. Commonly, the payment installments are made based on the breakdown of the script

phases. In most cases, certain payments will be guaranteed to the writer and others will be considered optional, based on performance. Payments are made as the writer reaches key milestones. An initial fee is usually paid upon commencement of writing. The balance is paid once the outline is completed, and the rest is delivered, for example, when the draft is handed in for review and notes. A typical breakdown follows:

- Premise (for television)
- Story beats/outline (with two revisions)
- Treatment (with two revisions—for long formats)
- Script: script fees can be divided (first draft, final draft, polish)

In most companies, no payments are made until a *Certificate of Authorship* (C of A) has been signed. The C of A assigns the material rights to the buyer for the writer's services on the script, which means that all written material and ideas are the property of the buyer.

Series Bible

A *bible* is the written concept that sets up the key elements for a series. It includes a description of the show as a whole, and it defines the main characters, their relationships with one another, the tone of the show, and the target audience. Premises (explained shortly) are also written for potential stories and episodes. Once the visuals are designed, they are placed in the bible to help enhance the storytelling. After the bible is assembled and signed off by the buyer, the seller, the executives, and the producer, it has multiple functions. Primarily, it is used as a tool for the writing team to help ensure consistency throughout the writing process. The series bible is also utilized by the casting director to select voice talent. Finally, it is used by the artistic crew to help them better understand the tone of the show and how the characters and plot are intertwined.

Script Stages

The writing of a project progresses through a number of stages before it is ready for production. In the case of a traditional narrative structure, this process includes establishing and setting up the characters, their world, their conflict(s), and the resolution. The following sections offer explanations of each of these stages.

Premise (Television/Short Form)

The *premise* is a paragraph or two that outlines the main story concept. Included are the main characters, the basic conflict, any complications, and how they are resolved.

Outline (Long-Form and Short-Form)

For long-form productions such as direct-to-DVD, features or television specials, an outline describing the key plot points of the story is an important foundation for script writing. This outline is broken down into three acts and chronologically lists each significant emotional and action moment portrayed in each sequence within each act. If storyboard artists are working on the project, it is often helpful to have them create visual representations of each plot point on this outline, generating a story beat board that can further inspire the writing and artistic teams. This artwork enables the crew to keep on track with the creative goals sequence by sequence.

In television, the outline is a more detailed version of the premise. It is generally a sequence-by-sequence breakdown of the story with a few lines of dialogue added to flesh out the characters, giving a project with multiple writers a sampling of the tone. In the outline, the flow of the action is spelled out. It is easier to change the structure of the story at this point rather than re-working it in the script stage. The number of pages may range from two to ten, depending on the format being produced.

Treatment (Long-Form)

The treatment is an expansion of the outline. It is generally a 20-25 page document that is broken down into a three-act structure and includes some dialogue.

Pilot Script

The pilot script is used in television and in some ways is similar to the series bible. Its purpose is to give the reader a sense of the tone of the show and to set up the characters while explaining their relationships to one another. If this script is successful, it may be produced as a story reel, or be fully animated prior to a series being greenlit. Like all television scripts, it would follow some or all of the various steps outlined next.

First Draft Script

A script is written in several drafts or phases. The first draft fleshes out the story arcs, adding dialogue and action. In the case of a television series, a story editor may ensure that the script is ready for production. He or she also makes certain that the writing across all episodes is consistent in following the characterizations and tone of the series as established in the bible. Once complete, the first draft is given to the key creative staff on the project—usually the producer, director, and creative executive—for notes. A half-hour script is between 25 and 35 pages long. A feature script for an 80-minute film can be anywhere from 80 to 110 pages, depending on whether it is dialogue-heavy or action-driven.

Second, Third, and Even Fourth Drafts or More

Each draft incorporates new notes given to the writer with the goal of improving the story through the revisions. The process of writing continues until the script is considered ready to go into production. On a series, the story editor may be responsible for inputting the notes after the second draft. In long form, it is very common for the script to go into production in segments while the rest of it is still in development.

In feature development, it is also common for new writers to be hired if the buyer/creator is not getting what he or she needs from the originally hired writer—it is always better to find the right tone in the script earlier rather than later. New writers may also be brought in to handle specific script tasks, such as punching-up the comedic content or deepening the emotional pull of the story.

Polish

This is the stage at which final touches are completed on the script. Rarely is the structure of the script altered at this point. The focus is most often on improving dialogue or clarifying content. It is not uncommon on feature films to attach a new writer to the project for the final dialogue pass.

The Feature Film Script

In general, the feature script is never locked by the time pre-production begins, the reason being that the story is further developed by the collaboration of the director, the storyboard artists, and the scriptwriter. The storyboard artist or, at times, a pre-vis artist, takes a written sequence and visualizes the action. The goal here is to further improve the script. If the budget allows, the scripting process may be concurrent with the storyboarding pass. (See Chapter 8, "Pre-production," for more information on this process.) Using the treatment or outline as a starting place, the writer holds a series of meetings with the project's director, head of story, and several of the storyboard artists to work out the story and flesh out the characters. Tracking these key character and story arcs as well as plotting out what is accomplished in each scene enables this group to further refine the story.

After these meetings, the writer creates a draft of the screenplay. The storyboard artists illustrate sequences based on the written material. Upon completion of this assignment, the group meets again to review the board, the animatic, or pre-vis sequence and to come up with more ideas and ways to improve the story. The artist pitches the board to the producer, director, and writer. Based on the producer's and director's decision, the artwork and script are revised as necessary. This process continues until everyone is satisfied and considers the sequence ready for production. This approach is very interactive and is a productive

method of improving the script. Given that animation is a visual medium, it helps ensure that the words in the script make the transition to the screen effectively. (For more information, see Chapter 8, "Pre-production.")

Production Scripts

Once production begins, the greenlit script goes through a number of stages. It needs to be constantly updated throughout the production process as lines and scenes are revised, added, and deleted. This information must be carefully handled through the production's centralized tracking system so that everyone affected by the changes is informed and that nothing is missed during production. Another key reason to track all versions of a script is for the purpose of determining screen credits. If the project falls under the jurisdiction of a union, this tracking is required, especially when significant changes are made. The following sections define the different types of scripts created during production.

Numbered Script

In the numbered script, each line of dialogue in the production script is numbered. This script is used during the voice recording session as a reference tool. These numbers are used and referred to by the actors, directors, recording engineers, and editors. All the description and scene information is left in the script.

Recording Script or Engineer's Script

In the recording script, typically all descriptions and scene directions are deleted, leaving only the lines of dialogue. This script is used to keep track of the recorded dialogue and the various takes the actor records. The director's select takes are circled on the script and are given to the editor to cut into the track. These lines are referred to as *circle takes*.

Conformed Script

Once the animatic is locked for production, the script is updated and conformed to match it. (see Chapter 8, "Pre-production.") All changes or deletions are included in the conformed script. Conforming the script can be an ongoing process as opposed to a one-time step.

Automatic Dialogue Replacement (ADR) Script

The ADR script shows the additional and replacement dialogue only. Used during post-production, the ADR script contains the lines of dialogue with their corresponding line number. These lines are also numbered with reference to time code. (For more information on ADR, see Chapter 10, "Post-production.")

Final As-Aired/Released Script

Because many changes can take place in post-production, the final-as-aired script is conformed to match the actual as-aired or released version. It is very important that this script be created because it is needed for closed captioning and foreign-language dubbing.

Script Clearances

It is key to begin the script clearance process—that is, ensuring that legal permission is obtained for details of the script—as early as the project begins to solidify. Under the guidance of an attorney or legal affairs department, the earliest details to clear should be the names of main characters and locations. In the event that a name does not clear, meaning that it is already legally claimed in a similar capacity, it is best to replace that element earlier rather than later. In such instances, the legal representative may be able to provide comparable names that are cleared for use to facilitate the replacement of the unavailable name. This process continues as new character and location names are suggested. The final script as a whole also requires clearance.

Visual Development

The two main visual elements necessary to set up the world of an animated project are *characters* and *locations*. Depending on the production, there may be many line and color drawings, just a few conceptual paintings, rough CG models (if applicable), or any combination thereof that helps to clearly bring the project to life. Similarly, dozens of artists may be developing a show, or there could be as few as one or two individuals wearing multiple hats, such as a production designer, art director, and/or character designer.

It is during the conceptual stage that the style of a show is established. Is it going to be cartoony, realistic, highly stylized, or a combination thereof? If there is absolutely no visual starting point on a property, one approach may be to assign several visual development artists to design the key characters and locations in a variety of styles. The director and producer can then review the artwork and use it as a jumping-off point for creating the look of the show. Conceptual art usually begins as a fairly loose approach to the characters and their environment. As development progresses, the style becomes more distinct and the artwork is further refined to match the direction that the project is taking.

When the show gets close to the pre-production phase, the producer's most consequential task is to have finalized and approved artwork. The final signoff on the character designs, location, and props is a requirement for the smooth transition of a project from development onto production.

This early stage in visual development is an opportune time for the buyer and other members of the team to make changes and give their input. At this point in the process, it is not that expensive to explore new ideas or even restart if the current designs are not working. Given the enormous cost of revisions once a project is in production, it is crucial to nail down and agree to as many key decisions as possible during the development stage. When revisions are made, a domino effect occurs because so many different elements need to be altered in order to keep the show consistent. (See Chapter 9, "Production," for more information on this process.) As a result, the cost implications to the schedule and budget can be significant. On lower-budget television projects, there may not be enough money to make changes, so it is necessary to finalize all key creative decisions prior to the start of production. Once the character, location, and prop designs are considered final and approved and handed off to animation, they are considered to be locked items—that is, no longer open to major revisions, especially if they are being sent to a subcontractor. (See Chapter 8, "Pre-production," for more information on the model package.)

It is also wise to consult legal advice during the visual development process for all main characters, props, and logos created. Similar likenesses to real persons or products may involve some risk of future litigation, and the acceptance of this risk should be discussed and determined between the owner of the project's copyright and the legal and business affairs group. An exception to seeking clearances takes place when they are used in parody, such as in the Academy Award®–winning short "Logorama" (Figure 5-2).



Figure 5-2 *Logorama*
(LOGORAMA by H5 [François Alaux, Hervé de Crécy, Ludovic Houplain] © 2009—Autour de Minuit Productions).

CASE STUDY: *Luna*

In order to best explain the various stages of animation from development to pre-production to production, the progression of *Luna*—an original short-form film that was created, developed, and produced by Rainmaker Entertainment—will serve as a case study. *Luna* is a CG project produced for final delivery in both 3D and 3D stereoscopic. This case study illustrates how a story can be produced for animation by outlining the various stages of its progress from its earliest conception to final output. See the Pre-production and Production chapters for process specific examples.

All of the elements from *Luna* illustrated in this book can be viewed interactively at www.rainmaker.com/luna. The website presents 2D imagery with color as well as moving turntables, animation tests, and the various stages of the story reel from boards through final animation, lighting, and sound. The symbol will serve as a cue that the element being discussed can also be viewed online.

The initial project was inspired by the image in Figure 5-3. The idea that a caterpillar was in love with a moth, yet living in a lamp with no way to pursue the object of his affection, was intriguing to the Rainmaker executives. From this singular image and simple concept, they developed a story about the power of attraction and unrequited love. After an extensive story development process, the final synopsis of the film landed as follows, presented here with a sampling of the visual development artwork that was created in order to establish the look of the characters and environment for Luna (Figures 5-4 through 5-7). The team found Silky as a caterpillar before determining his look as a moth:

Happily lazing about in his home, eating leaves and enjoying the view, we meet Silky the caterpillar.

It is dark. A light suddenly illuminates Silky's home. A shadow ominously casts upon him. Startled and afraid, Silky tries to hide but has nowhere to go. He nervously peeks up and is surprised to see a most beautiful creature—Luna the moth, who smiles and flutters about gracefully. It appears she is flirting with him. Silky is immediately smitten. It's love at first sight, and Silky's alter ego—a Spanish matador—transforms him. Using his many charms and talents, Silky makes his move to woo and romance Luna…

Luna too appears smitten, but the two "lovebugs" are separated. She bangs on the glass wall desperately trying to reach him. Her efforts are futile. As Silky continues with his debonair moves, the music builds and the two of them become more and more attracted to each other. The music crescendos, their lips pucker for a kiss, they rush towards each other. Thwump! Silky hits the glass. Thwump! Luna hits the glass. Silky's puckered lips have nowhere to go. And then the light goes out. Luna is dramatically upset. Silky doesn't understand what is happening.



Figure 5-3 *Luna:* Concept development.

Cut outside to reveal that Luna is simply a moth attracted to the bright light in a street lamp.

Returning to Silky's POV, he realizes the light was the focus of her attraction. Heartbroken, Luna flies away. As she leaves, Silky is devastated, his heart also broken. Despondent, he attempts to return to his old life of leaf eating—but without love, there is no longer joy. He cocoons.

Time passes. Silky breaks free from his cocoon. He sees his reflection in the glass and marvels at his new body. Unraveling his wings, he is thrilled to discover that he has metamorphosed into a moth. A shadow of a moth flies by, reminding him of Luna. Another metamorphosis takes place: Silky as the "Don Juan of Moths" emerges. Determined to find the love of his life, Silky breaks free from his old home in search of Luna.

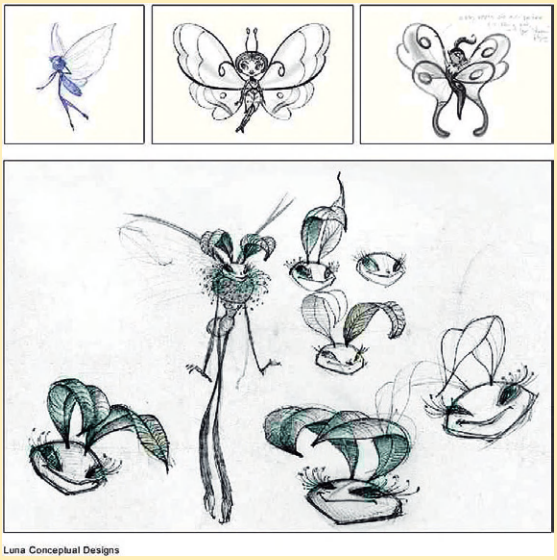


Figure 5-4 *Luna:* Character development for Luna.

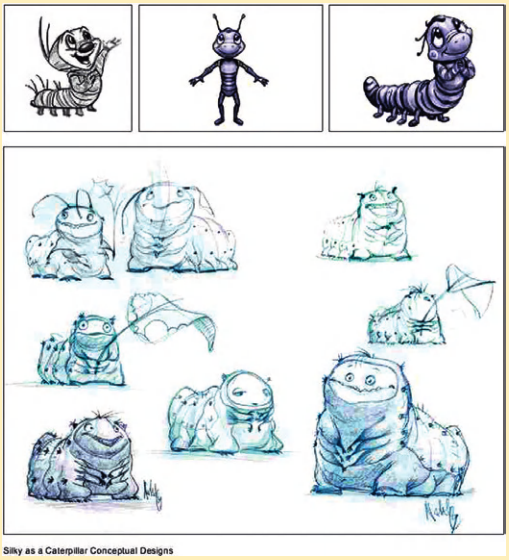


Figure 5-5 *Luna*: Character development for Silky as a caterpillar.

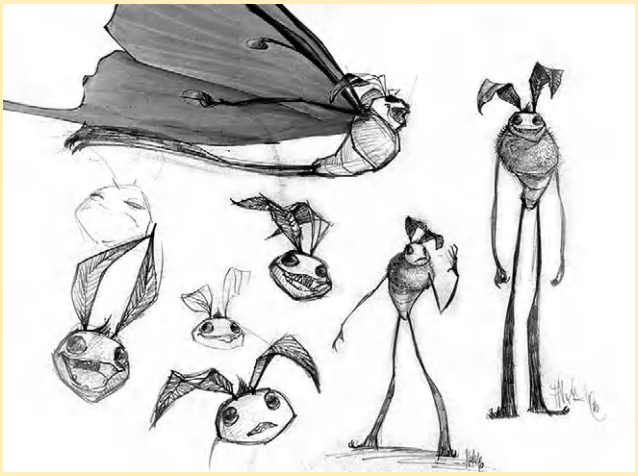


Figure 5-6 *Luna*: Character development for Silky as a moth.

Flying up through the clouds, he spots her. She sees him too. They come together. It is again love at first sight, but this time it is mutual. They do a dance. Backlit by the moon, the setting is romantic. It is time for the kiss they could never have: they pucker, close their eyes, and lean in towards each other. As their lips are about to touch, a light turns on. They look up and choose to ignore it. But alas, another light and then another turns on. They continue their pucker; Silky and Luna look at each other, but the power of the light shines even brighter and begins to sparkle. Finally, the pull of attraction is too strong.

Following Silky, the camera pulls back to reveal Luna racing towards one street lamp, and Silky towards another. Pulling back even further, more street lamps are revealed, with many more moths equally enthralled, attracted, and in love . . .
with the light.



Figure 5-7 *Luna*: Location development.

Conclusion

Using the script, bible (if applicable), and conceptual artwork, the producer analyzes the complexity and cost needs of the project to create the production plan, with input from key executives (production and creative). The development materials (the script and the artwork) produced along with this plan are used to get a greenlight for production. After the project has been greenlit and all of the items listed earlier are completed and signed off on by the key players, the script is ready to go into the next phase of the process: pre-production, which is discussed in Chapter 8.

6

THE PRODUCTION PLAN

Production Plan Overview

Now that you are ready to make the leap into production, it is time to put a plan in place. This complex undertaking is a highly collaborative effort which involves the core creative and technical team. Ultimately, the production plan should function as a roadmap that ensures everyone is fully invested and walking on the same path. Devising a production plan is a methodical yet creative process. In this step, the producer has to commit his or her vision to paper. If this vision is deficient, as in any creative process, the producer must be flexible and open to questioning and changing his or her parameters in order to come up with alternative scenarios. Devising the plan entails consulting with the core team and department heads, drawing on their expertise in order to develop an educated approach to the project. Each production step will require a certain number of presuppositions. The end goal is to create a plan made up of four key items including the budget, schedule, crew plan, and list of assumptions. Because every phase in animation is interdependent, the producer must be able to anticipate all possibilities and adjust the production plan in order to accommodate each component.

A producer's main task is to ask lots of questions in order to gather as much information as possible from the many individuals involved in bringing a project to life, such as the buyer, the director, the visual effects supervisor (if applicable), and other key parties. Once this information is assembled, the producer must figure out the best way of allocating money throughout the budget based on its creative needs. For example, if a project is strictly story-driven with simple character designs that warrant limited animation, it would be necessary to put significant funds into the areas of writing and cast/recording rather than animation. A solid example of this kind of a project can be found in Comedy Central's *South Park*, on which the scripting and voice recording phase can potentially continue until mere hours before airtime. If the look of a project is key to its success, the budget

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must be set up so that numerous creative iterations can be explored and finessed. Whatever is determined to be the best balance of resources for the project, the producer needs to see that all areas are addressed and accounted for in the budget so that there are minimal surprises mid-production. The schedule then needs to be shaped as a realistic reflection of the options available with the assumptions written to make certain that all critical points can be accommodated. Once approved, the production plan becomes a baseline tool should there be significant changes requiring overages and therefore additional funds.

Steering the Ship While Planning a Party

Amy Jupiter, Line Producer

The production plan is truly the creative brainchild of a producer. For me, production planning and managing to that plan is my favorite part of the process. It tells us the fiscal and temporal parameters to which we are working. It's a touchstone against which we constantly check back to make sure we are going in the right direction. It is a complex network of information and interdependencies that have to be taken into account every day, all day. Producing is very exciting and takes experience and a calm temperament so as not to become overwhelmed with all the information coming at you moment by moment. A good plan provides for some flexibility so that the creative vision can evolve and production management can respond to these changes.

Running and determining the many scenarios required to launch and ultimately oversee the plan is an ever-evolving illustration of all the parts that will go into creating the project. It is analogous to being the captain of a squarerigger ship in a storm. The captain has the map to guide the crew in the general direction to be traveled in addition to the expected arrival time at the ultimate destination. Meanwhile, trying to control the ship with its many moving parts while having to integrate many real-time shifts in the water and wind and crew abilities proves challenging, even in good weather, for the most seasoned of leaders.

There are a couple of high-level tools I use to start the production planning process. I begin my planning graphically by laying out a very simple overview of the time frame and major milestones of the project. The next step is to ensure that all of the stakeholders are on the same page with regard to budget goals and the general assumptions of the project. I relate this process to party planning. Everyone has different expectations, and finding a balance between the person paying for the party and the person who is giving the party sometimes proves to be the most challenging of discussions. The person giving the party (the director and creative team) focuses only on the guest experience and making the party the most memorable it can be. The person paying for the party (the studio or financier) wants to keep costs in line. Creating a strategy that ensures each stakeholder feels like they are being heard takes finesse and an advanced degree in psychology.

Having a detailed plan approved and ready for production is truly a satisfying experience, but the reality is that this is not just a one-time experience. There will be more—right when you get comfortable, inevitably something will emerge and it will be time to start changing it again.

List of Assumptions

As the budget, schedule, and crew plan are assembled, the producer must put in writing all of the areas or the parameters upon which the production plan is based. This is known as the producer's *list of assumptions*. It enables everyone to have a mutual understanding of the project and its requirements. When changes are made to the plan, this agreed-upon template makes it easier for both the producer and the buyer to identify and evaluate the costs and schedule revisions. Typically, the following items need to be addressed in a list of assumptions:

- The delivery date
- The schedule
 - Thinking in frames
 - Quotas
- The project's format, length, and technique
- Complexity analysis
 - Script breakdown
 - Style/art direction and design
 - Average number of characters per shot
- Production methodology
 - Research and development
- The crew plan
 - The level of talent
 - The role of key personnel
- Creative checkpoints
- The buyer's responsibilities
- The payment schedule
- The physical production plan
- Training
- Recruiting and relocation
- Reference and research material
- Archival elements
- The contingency

This list outlines the areas to be considered when building the framework for a production plan and preparing the final budget. Each of the categories listed are explained in detail so that they can be applied to planning CG and 2D productions. Because each project is unique, there may be other elements to take into account; however, the following key items must be considered when setting up any production.

Delivery Date

In a perfect world, a budget and schedule are configured without a specific delivery date so that the plan itself is driven by the creative needs of the project, but this is rarely the case. In most

cases, the delivery date for the project is the producer's starting point for creating his or her strategy. This information comes from the buyer and is typically based on air or release dates. These dates can come from a number of sources, including ancillary groups involved in distribution, merchandising or promotion, or possibly a studio's overall production plan. If the delivery date is very tight, it will drive the pacing of the project. It is also a determining factor in whether the production will be done in-house, or with a subcontracting studio, or through multiple subcontractors.

The Schedule

It is critical that the producer has a schedule for reference when budgeting a show. Using the delivery date as a starting place, the producer can begin to put a preliminary schedule together. The schedule is the number of days, weeks, months, or years needed to complete the project from script to delivery. As numbers are plugged into the budget, the schedule will probably be moved around to accommodate both the creative and fiscal needs of the production. It is also important that the producer has this information available for reference so that he or she can assess staffing requirements. If the producer is using overseas subcontracting studios, it is important to investigate and plan for national holidays and local traditions that may affect the schedule.

Thinking in Frames

On a live action production, the camera rolls as long as necessary and in as many angles as possible to capture a scene, whereas in animation every shot is thought out in advance and built frame by frame. Every aspect of the character's actions and movement and the surrounding location must be created; therefore, the project becomes divided into a specified number of scenes or shots, each of which typically have a finite number of frames based on dialogue and action. The number of images per foot or second needs to be established—that is, full animation versus limited animation. If it is full animation where every frame or every other frame is drawn or rendered the animation will be extremely smooth. A classic example for full animation can be found in Richard William's "Thief and the Cobbler." A more contemporary example is Disney's "Tangled." Well-known examples of limited animation include animé and television series, such as *Fairly Odd Parents*.

Quotas

Quotas are a system by which the artwork is broken down into specific units and their completion is paced over the production's timeline. In the case of features, for example, schedules are

produced with targeted weekly quotas calculated in shots, footage, or seconds for each department and individual artist. The complexity analysis and qualitative expectations (discussed later in this chapter) ultimately drive a project's quotas. Depending on the quality of animation expected, the weekly quota will reflect the optimal amount of work that can be completed. If a project is not as demanding from a qualitative standpoint and the complexity level is minimal, typically the weekly per artist quota and volume of shots generated will be higher. Referencing the look or style of an existing television series or a feature film is a great way of coming up with the quotas per artist per week per department. Once these numbers are determined, they can be plugged into the crew plan and budget for calculation. When generating the schedule, be realistic about what can be accomplished in the time available. Allowing room for creativity and facilitating production efficiency is critical to fulfilling quotas. If you are not able to evaluate the time needed per department, ask questions from reliable sources such as the director, the visual effects supervisor (if applicable), and the department head (if available)—doing so will help ensure that the project is managed well in all areas.

For a typical television series, the producer does not have to generate this information as precisely. Because production is handed off to subcontractors who return the completed episodes and manage this step of the process themselves, it is their responsibility to define quotas for their studio.

In this chapter, you will find generic master timelines or macro-schedules that outline production timeframes for television and feature projects. Note that these samples are to be used as general guidelines and should be modified to suit the processes, techniques, and needs of the particular production pipeline and software capabilities. When a production is up and running, the master schedules should be further broken down into more detailed schedules, called micro-schedules, for each department.

The following figures are used to pace a production and to set up a system by which enough work is generated in every department to create ample inventory for the artists. By evaluating the work completed in relation to the quotas on a weekly basis, the producer can assess the status of production in relation to its delivery date and budget. (See Chapter 11, "Tracking Production," for further information.)

The television master schedule shown in Figure 6-1 illustrates 13 episodes in pre-production, production, and post-production phases using the traditional 2D format. Figure 6-2 breaks down a single episode and lists the specific production steps involved, starting with script writing and ending with delivery. All of the episodes follow the same schedule and overlap. Figure 6-3 shows how the pre-production, production, and post-production

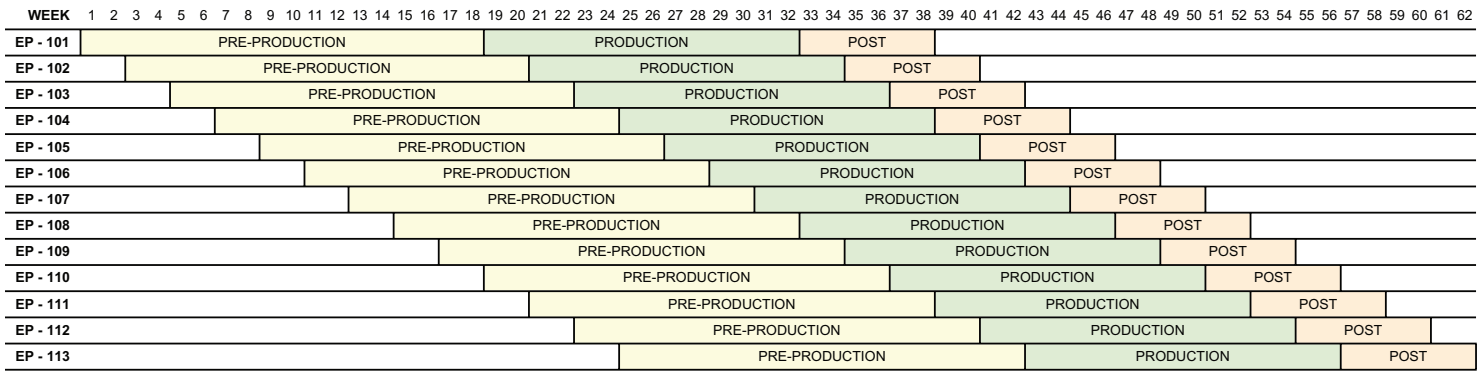


Figure 6-1 Television master schedule: 13 episodes in traditional 2D format.

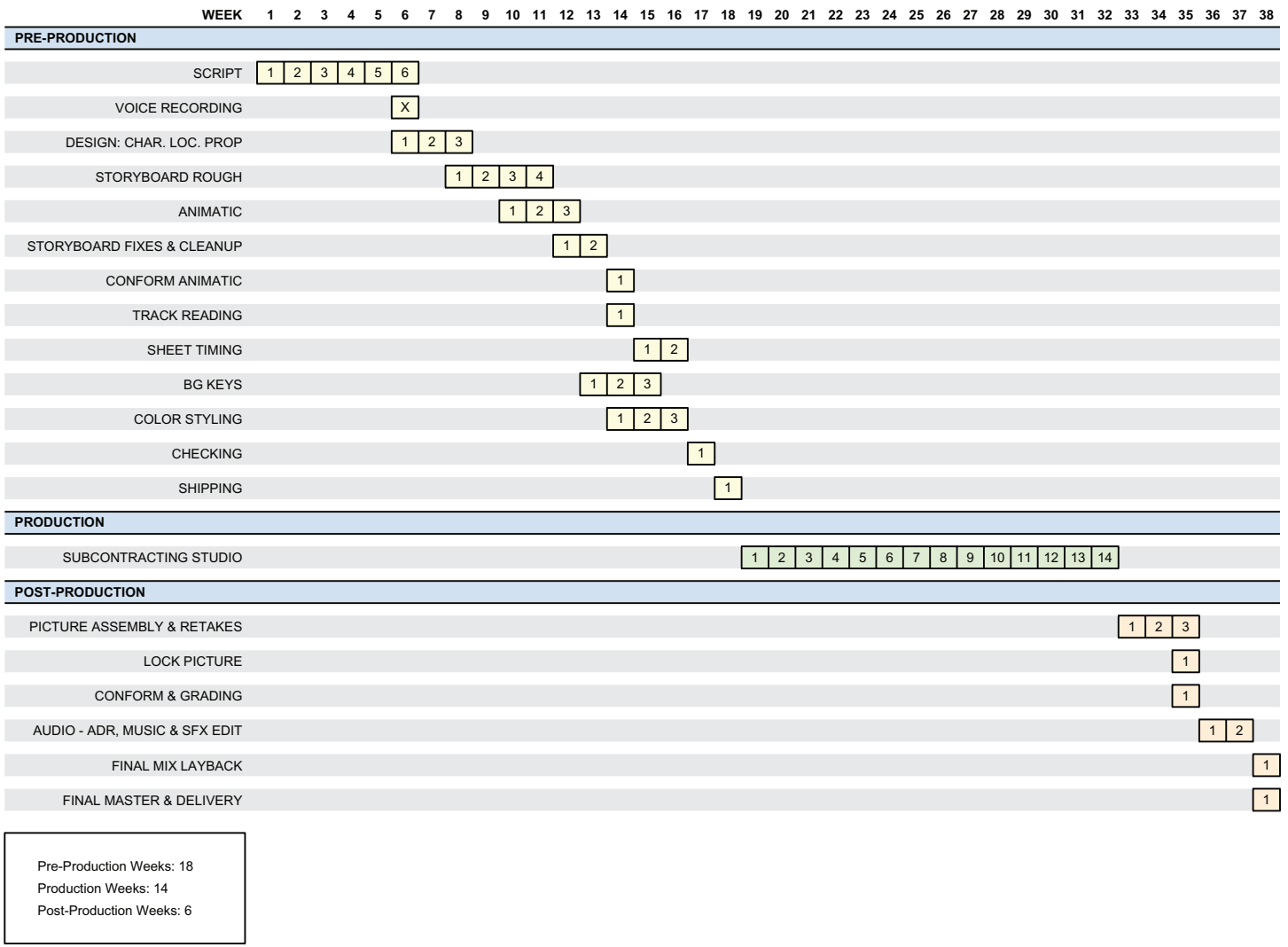


Figure 6-2 Traditional 2D television single episode schedule: step-by-step process breakdown.

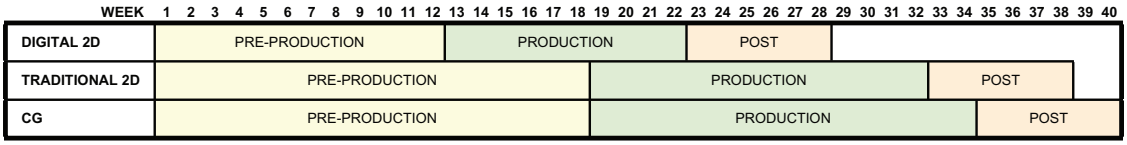


Figure 6-3 Television average production timeline comparison.

timelines compare in the creation of a 22-minute television series based on the technique used.

You will also find in this chapter generic schedules for a CG feature (Figure 6-4) and a traditional 2D feature (Figure 6-5). Because the processes for producing CG projects vary widely based on budget and technique, Figure 6-4 should be viewed with this in mind: the CG timeline details and feature animation quota numbers (Figure 6-6) provided here are applicable to high-end productions. The master schedule is divided into pre-production, production, and post-production. The chart illustrates the number of months each department typically runs, when they overlap, and what key stages must be completed before production can officially start. On both charts, there is an indication of a partial crew for a number of categories because in animation, many departments are interlinked. For example, on a CG feature, while "look development" tests are taking place, there is a need for staff to assist with lighting and compositing. Or, as a feature undergoes initial test screenings, notes come up that require fresh storyboarding, and it will therefore be necessary to maintain a few artists to address the script revisions. Both ramp-up time and prep time are a necessity for shot production. As departments begin work or start winding down, the crew is scaled up or down based on the numbers necessary to support completion of shots in accordance with the project's weekly quota requirements.

Managing a feature production requires two different modes of tabulation. One is the total number of shots, and the other is the actual number of frames or seconds to be animated. Table 6-1 is a reference chart converting seconds into frames and feet. Using a project that runs 85 minutes as an example, the producer would first determine the number of seconds of animation needed by converting the minutes into seconds—in this case, the total is 5,100 seconds. In order to ascertain the feature's shot production requirements, one would then apply the commonly used rule of thumb that that an average shot is roughly 3.33 seconds. By dividing the total number of seconds (5,100) by the per-shot average of 3.33 seconds, this project is set up for the completion of 1,532 shots. The next objective is to plan out how the artwork (or number of shots) can be accomplished within the parameters of the budget and schedule.

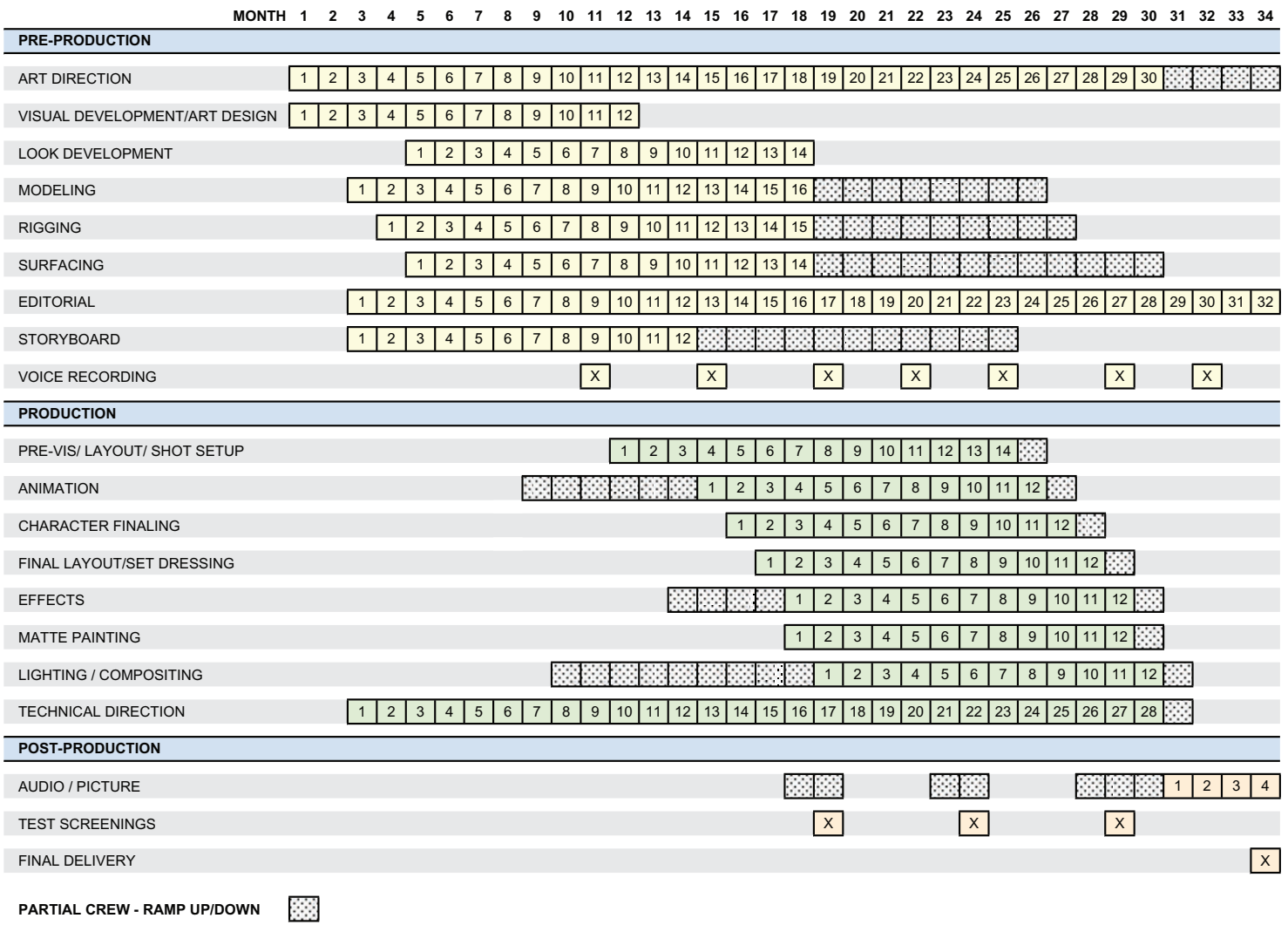


Figure 6-4 Feature production master schedule: CG format.

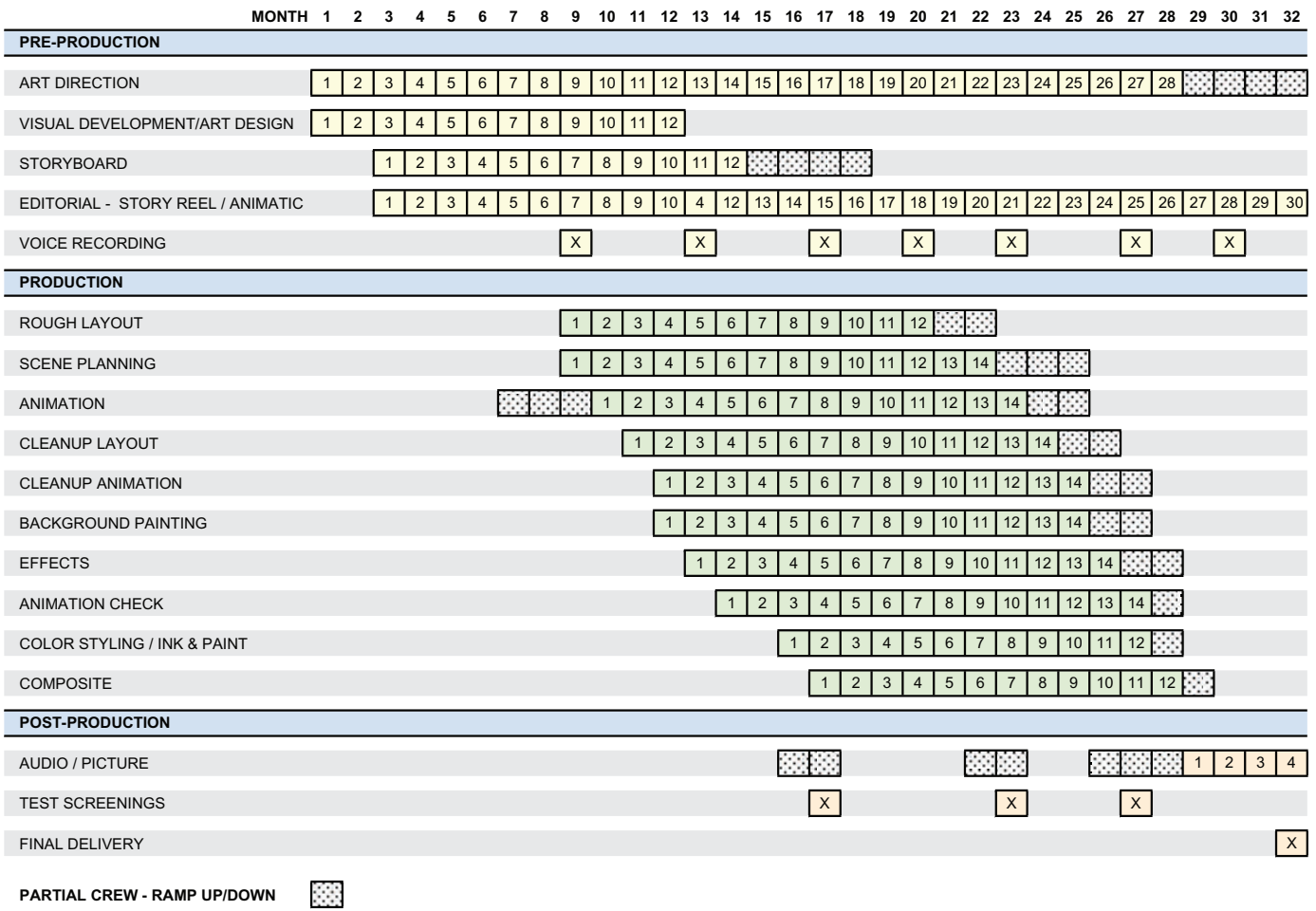


Figure 6-5 Feature production master schedule: traditional 2D format.

CG FEATURE ANIMATION WEEKLY QUOTA

TOTAL LENGTH: 85 min. (5100 sec.) **NUMBER OF ANIMATORS: 28**
DURATION: 52 WEEKS **WEEKLY QUOTA PER ANIMATOR: 4 sec.**

WEEK	WEEK ENDING	NUMBER OF ANIMATORS	SEC. PER ANIMATOR	TOTAL	CUMULATIVE
1	1/17/14	4	1	4	4
2	1/24/14	6	1	6	10
3	1/31/14	6	1	6	16
4	2/7/14	20	2	40	56
5	2/14/14	20	2	40	96
6	2/21/14	20	2	40	136
7	2/28/14	20	2	40	176
8	3/7/14	20	3	60	236
9	3/14/14	20	3	60	296
10	3/21/14	20	3	60	356
11	3/28/14	20	3	60	416
12	4/4/14	20	3	60	476
13	4/11/14	20	3	60	536
14	4/18/14	20	4	80	616
15	4/25/14	26	4	104	720
16	5/2/14	26	4	104	824
17	5/9/14	26	4	104	928
18	5/16/14	28	4	112	1040
19	5/23/14	28	4	112	1152
20	5/30/14	28	4	112	1264
21	6/6/14	28	4	112	1376
22	6/13/14	28	4	112	1488
23	6/20/14	28	4	112	1600
24	6/27/14	28	4	112	1712
25	7/4/14	28	4	112	1824
26	7/11/14	28	4	112	1936
27	7/18/14	28	4	112	2048
28	7/25/14	28	4	112	2160
29	8/1/14	28	4	112	2272
30	8/8/14	28	4	112	2384
31	8/15/14	28	4	112	2496
32	8/22/14	28	4	112	2608
33	8/29/14	28	4	112	2720
34	9/5/14	28	4	112	2832
35	9/12/14	28	4	112	2944
36	9/19/14	28	4	112	3056
37	9/26/14	28	4	112	3168
38	10/3/14	28	4	112	3280
39	10/10/14	28	4	112	3392
40	10/17/14	28	4	112	3504
41	10/24/14	28	4	112	3616
42	10/31/14	28	4	112	3728
43	11/7/14	28	4	112	3840
44	11/14/14	28	4	112	3952
45	11/21/14	28	4	112	4064
46	11/28/14	28	4	112	4176
47	12/5/14	28	5	140	4316
48	12/12/14	28	5	140	4456
49	11/21/14	28	5	140	4596
50	11/28/14	28	6	168	4764
51	12/5/14	28	6	168	4932
52	12/12/14	28	6	168	5100

Figure 6-6 Feature production quota schedule: CG animation.

Table 6-1 Conversion Chart for Seconds, Frames, and Feet Calculations

Seconds	Frames	Feet
0.042	1	0.0625
0.083	2	0.125
0.125	3	0.187
0.167	4	0.25
0.208	5	0.312
0.250	6	0.375
0.292	7	0.437
0.333	8	0.5
0.375	9	0.56
0.417	10	0.625
0.458	11	0.687
0.500	12	0.75
0.542	13	0.812
0.583	14	0.875
0.625	15	0.937
0.667	16	1.000
0.708	17	1.0625
0.750	18	1.125
0.792	19	1.187
0.833	20	1.25
0.875	21	1.312
0.917	22	1.375
0.958	23	1.437
1.000	24	1.5

Using the length of 5,100 seconds and dividing that by the number of available weeks (52) determines that this project needs 28 animators to produce a total number of 4 seconds per week in order to meet the targeted quota (Figure 6-6). By contrast, as illustrated in Figure 6-7, on a 22-minute digital 2D television series, it is possible to generate 30 seconds of animation per artist per week and complete the show using 8 artists in 6 weeks.

Please note that these charts do not take into consideration sick days, vacation time, national holidays, and union holidays. All of these items must be tailored to the individual studio and country and accounted for when creating a schedule in order to set up realistic goals for the production team. Another item to consider when creating this type of a budget is ramp-up time. In the CG feature animation chart, artist quota starts with a lower scale of productivity expected, with that number gradually

DIGITAL 2D TELEVISION ANIMATION QUOTA

TOTAL LENGTH: 22 min. (1320 sec.) **NUMBER OF ANIMATORS: 8**
DURATION: 6 WEEKS **WEEKLY QUOTA PER ANIMATOR: 30 sec.**

WEEK	WEEK ENDING	NUMBER OF ANIMATORS	SEC. PER ANIMATOR	TOTAL	CUMULATIVE
1	1/17/14	8	20	160	160
2	1/24/14	8	25	200	360
3	1/31/14	8	30	240	600
4	2/7/14	8	30	240	840
5	2/14/14	8	30	240	1080
6	2/21/14	8	30	240	1320

Figure 6-7 Television production quote schedule: digital 2D animation.

increasing as the artist becomes more familiar with the style and requirements of the show. Ramp-up should be part of each department's calculations. An allowance of 10 to 20 percent of additional quota should also be made for iterations based on the project's budget and qualitative expectations.

Project's Format, Length, and Technique

Format

Before embarking on a production plan, the producer must know the format of the project. The possible formats for an animated project include television series, TV special, short format (either for the Internet, mobile, television, or theatrical release), interstitial (small segments, shorter than a commercial, such as a promo), commercial, direct-to-DVD, and feature. Also to be determined up front is the medium (film, tape, or digital file) on which the project will be delivered and whether it will be produced in stereoscope.

Length

Early in the planning stages, the script is timed to determine the total length of the project. Television series episodes for network distribution generally run 22 minutes long each or may be comprised of two 11-minute segments; direct-to-DVD projects range from 60 to 80 minutes; and a feature can vary, usually running anywhere between 70 to 110 minutes. Animated shorts and content created for the Internet have more flexibility in terms of length. To get a ballpark running time of a script, a director may use a stopwatch while reading the pages to estimate its length. Although this method is not precise, it allows the producer to generally assess the project's running time. The rule of thumb is that one page is equivalent to one minute, but adjustments might be necessary if, for example, there is a song title inserted in the text or if an action sequence is described in just a few words.

By establishing how many minutes of animation is required, the producer can begin to set production goals. In CG and digital 2D production, shot lengths are commonly measured in seconds and frames; traditional 2D animation uses feet and frames for timing purposes.

Technique

Deciding upon the animation technique that best matches the project's content is critical because it directly affects the production process and cost. The most commonly used techniques are CG and 2D (which can include hand-drawn images and/or the use of digital assets). Stop-motion is also another option but less common. In CG and digital 2D animation, typically the conceptual materials and storyboards are drawn by hand, and all remaining production art such as asset creation—be it character, environment, prop, or visual effects—are created digitally through a myriad of stylistic and software options. Traditional paper-based 2D involves line drawings in the layout, animation, cleanup, and effects stages, which are then scanned in and integrated into the digital production pipeline. Stop-motion animation uses the process of stop-motion photography by shooting frame-by-frame 3D objects such as puppets or clay figures. An animated project may draw upon one or a combination of these techniques. The animation can be limited or full or somewhere in between, which again will be driven by the project's creative direction and/or its budget. (See Chapter 9, "Production," for a detailed discussion on CG and 2D production processes.)

Complexity Analysis

One of the key things in budgeting is defining the complexity of a project, which is explored through a detailed analysis of the conceptual artwork and the script being used to create the production plan. A complexity analysis is a very important multi-faceted step in determining how to allocate the resources accessible on a project. The results illustrate the status that a project is in. If, for example, the material is overly ambitious and exceeds the budget and schedule allowances, then the complexity must be addressed in terms of a simplification pass to bring it into alignment with the available funds. The following sections outline the different factors that affect the complexity of a project and the types of evaluation that should be done.

Script Breakdown

The first step is to break down the script, which means generating an itemized list of every single asset that needs to be created

(and when applicable) reused. This breakdown is used to drive the production plan and allocation of resources needed to create all of the various assets—character, environment, and props—for a project as well as the visual effects required. All of these elements must be subcategorized into main and secondary elements, as the main or primary assets will require more time than the secondary ones. The producer working with the director, visual effects supervisor (if applicable) and art director should analyze the number and complexity of character models locations, props, and effects. Conceptual artwork or reference material and any completed designs should also be used in tandem with this list in order to determine the amount of time or number of staff hours it will take to create the various elements from a production standpoint.

Using the script breakdown, the next step is to do a *content analysis* of the script: a detailed evaluation of the story that enables the producer to gain overall insight into what will be involved in producing the project. This analysis helps the producer identify sequences that may need to be prioritized and/or require special attention. During this process, the script is once again scrutinized for a number of specific elements that can affect the size of the budget. A sampling of key questions to explore include: *How much look development time is required to achieve the specific style or art direction envisioned for the project? Does the style of the show involve developing a particular software program or proprietary tools? How many characters are in the main cast? Are there many crowd shots and how often are they needed? How many locations/sets will there be and what is their scale? How complicated are the camera movements? Are the props simple or complex or a combination of both? What kinds of special effects will be necessary, and will the project be effects-heavy? Are there songs? If so, how many and what is their purpose (that is, are there big production numbers or soliloquies)? And equally as important, how much reuse is possible?*

Style/Art Direction and Design

The choice of art direction and design and how the imagery is generated through the selected animation technique has a direct impact on the production plan. Whether the style of animation is highly nuanced—rich and fluid versus graphic and stylized—also has an impact on the budget. In the best-case scenario, the look of the project is clearly established during the development phase. The producer can then evaluate the complexity of the artwork along with the number of assets to be built and create a schedule and a budget accordingly. Unless there is an agreed-upon style, the producer has no choice but to prioritize and allocate funds to resolve all outstanding stylistic questions in order to set the art

direction for the project. For example, if the look desired is similar to Peter Jackson's and Steve Spielberg's *The Adventures of Tintin: The Secret of the Unicorn*, the feature will require a substantially larger budget than the type of art direction style of classic hand-drawn animation as depicted in Sylvain Chomet's *The Illusionist*. (For more information, see Chapter 8, "Pre-production.")

Average Number of Characters per Shot

Assessing how many characters are to be animated on a shot-by-shot basis is also key to determining your budget, as it will affect the amount of time the crew has to spend on each shot and the quotas they can produce each week. Aside from crowd shots, does the story involve at least two or more characters in an average scene, or will the focus be primarily on one character? Equally as consequential is how much contact there is between the characters. For example, when characters come in contact in the CG realm, there are interpenetration issues that require more production time (either by an animator or a character effects technical director) to solve. Similarly, in 2D animation that involves hand-drawn frames, if there are two characters with no physical contact, the animation for both characters can be cleaned up concurrently by two artists and can therefore speed through the cleanup phase, whereas characters that have contact will be animated on the same level and will require more time as one cleanup artist must complete the task.

Part Two, Three or More

Kirk Bodyfelt, Producer, Sony Pictures Animation

Making a sequel to a successful feature film is a fun yet challenging task, as I discovered in my work on Sony Pictures Animation's *Open Season 2* and *Open Season 3*. Right from the greenlight, the pressure to deliver a film that lives up to the standards established by the original project is immense. From storyline to performance to art direction, the bar has been set, and certain expectations arise within the audience; sometimes this pressure comes on top of the reality that the resources for a sequel are often significantly less than those of the original project.

The real trick is deciding what matters most to the audience, and making sure that you spend your budget on what is important (characters and animation), not on "bells and whistles" (complex effects, lavish production details). Maintaining a consistent look and animation style between the original and sequel production requires technical know-how. Even if the same studio is working on the sequel as did the original, the tool set used to create animated films—especially those in CG—is constantly changing. Unless a sequel is going into production immediately upon the completion of the original film (an unlikely situation), technology updates often require even the "reused" digital assets (i.e., the characters, sets and props that are returning, unchanged, to the sequel) to go through a complex procedural update so that they work within the new production pipeline. It is certainly less effort than creating an element from scratch, but it is a decent amount of labor that must be scheduled and budgeted for.

In many direct-to-DVD sequel scenarios, the budget is often limited for an in-house production and the sequel is sent to a subcontractor. Reaching or exceeding the established bar of expectations by the theatrically released feature film is doubly compounded when outsourcing a sequel to a different studio. In such a production, the director and creative leadership must work hard to help maintain as much of the original personality of the established characters and as much of the feel of the established world as they can within the parameters of the subcontract studio's pipeline. Most lower-budget animation houses do not have the luxury of proprietary tool sets and flexible pipelines but rather employ simpler, "out-of-the-box" software packages. Although this setup allows significant financial savings in terms of start-up costs and productivity, it invariably results in a decreased ability to match the exact look of the higher-budgeted predecessor. Compromises have to be made in order to work within this more limited pipeline.

One key advantage to doing a sequel is that you are working within an established universe. The real challenge, then, is the decision of how to expand upon the original film's plot in a comfortable yet refreshing way. Although it is important to present a fresh and exciting new storyline in a sequel, it is likewise important to maintain the same sense of character and attitude as the original film. When writing the screenplay, the filmmakers must constantly ask themselves, "Is this an action or line of dialogue we would expect from this character?" Ideally, the first film planted a handful of story points that naturally make sense to follow through in a sequel: taking a character relationship to the "next level," dealing with a returning nemesis, or perhaps giving a popular minor character an expanded role in the continuing saga. For instance, at the end of the original *Open Season*, Elliot the one-horned mule deer has just won the affections of Giselle, the most beautiful doe in the forest. At the beginning of *Open Season 2*, Elliot's friends are throwing him a bachelor party in celebration of his upcoming wedding to Giselle. Much of the plot line focuses on Elliot's nervousness in committing to a marriage and how he eventually comes to realize that being tied down in a relationship is not necessarily a bad thing. In *Open Season 3*, we see that Elliot and Giselle are the parents of three children, and Elliot must learn how to balance family responsibilities with his loyalty to his friend Boog the bear.

Reading critical reviews of the first film and reviewing any audience reaction specifics that were collected (from a preview screening, for example) are also ways to make sure your efforts are focused on the right ideas and characters. This approach plays into the concept of being smart with how your overall budget is spent as well, if there are financial limitations to the project. Huge effects sequences, crowd scenes, and boatloads of new characters often will not fit into the budget of a direct-to-DVD release. It is better to realize this factor up front than to fall in love with a plotline that will later prove to be impossible to produce with the resources at hand. Conversely, acknowledging that character-driven stories with limited complex locations and props are much simpler to produce will provide a better chance of developing a plotline that is manageable with a reduced budget.

Like any live action counterpart, an animated film's sequel benefits greatly from having its original cast return. Retaining the same voice talent helps hugely in maintaining a character's personality and, subsequently, a sequel's feeling of consistency. However, due to scheduling and/or budgeting issues, the original actors may not be an option. Luckily, animation has the benefit of not relying on the visual aspects of an actor, so re-casting an actor with similar vocal qualities or a literal "sound-alike" is a possibility that works much better than re-casting in live action films. It is then incumbent upon the director to ensure that the replacement voice talent finds the right balance between delivering his or her own performance while projecting a vocal quality to satisfy the pre-existing fan base. For example, on the first *Open Season* film, we cast Martin Lawrence as Boog and Ashton Kutcher as Elliot. When it came time to do the sequel, neither actor was available to reprise his role, so the search for replacement voices began. Rather than trying to find generic sound-alikes, our goal was to find other established actors with similar voice qualities to the characters. After extensive searching, we ended up re-casting Boog with Mike Epps and Elliot with Joel McHale. Mike's deep, soulful, energetic voice worked great as the new voice of Boog, and Joel McHale's high-energy rants from his weekly television show *The Soup* proved he could be an excellent replacement voice for the wacky Elliot role.

Even after following these guidelines, you must step back, look at the plot on its own, and make sure that it is entertaining and fun, independent of character familiarity. A decent amount of your audience on a sequel has either not seen the original film or has forgotten most of the plot specifics from it. Through simple storytelling and crafty dialogue plants ("Remember last time when . . ."), you can help ensure that a sequel can stand on its own legs as an independent film.

Although lower-budget sequels are primarily created for the home entertainment market, there are sometimes opportunities for these productions to garner theatrical releases in the international market. As long as the final product is rendered at a high resolution, the images should be sharp enough to be projected in movie theaters if a theatrical run is merited. *Open Season 2* and *Open Season 3*, which were conceived as direct-to-DVD productions from the outset, both had successful theatrical runs on big screens in Russia while also filling a notable number of small screens around the world. Our team couldn't be prouder of the work we did in making the most of those sequel opportunities and providing successful encores to the original film.

Production Methodology

Establishing a production pipeline or methodology from the outset is essential. The production process should include all of the steps to be taken and how they will be handled, including milestones, approval requirements, and point people. The technique used directly affects the methodology chosen as well as the staffing and technology support required. (See Chapter 9, "Production," for further information on CG and 2D processes.) It should be noted, however, that some flexibility to step outside of this pipeline may be required on highly complex shots. For example, a stylized smoke pattern visual effect may be better hand-drawn and scanned than created in the normal CG software system. Whatever the selected technique, all parties involved should anticipate and facilitate a detour when necessary to support the creative vision while striving to adhere to the planned pipeline more often than not.

One of the first decisions to be made at this stage is whether the budget allows for completing all the production elements in-house or whether a partner studio is to be involved. In either case, the producer should determine a general crew structure, including the number and types of team members on both the artistic and administrative sides of the process to support the production methodology. On projects that will be outsourced, the producer should plan for fees and other costs associated with subcontracting such as pipeline compatibility issues. (For further information on subcontractors, see Chapter 7, "The Production Team.")

Research and Development

On CG productions, it is important to allow time to complete tests for each unknown element such as new software or a challenging character design. Without such tests it is impossible to accurately determine what kind of talent and technology setup may be needed.

The next step for the producer is to assess what materials will and will not be produced in pre-production, because this sets up the flow of production. On features and direct-to-DVD projects on which budgets are higher, all design elements—including characters, locations, props, and effects—are typically designed in-house. On television projects, this is not always the case, as there may be some elements to be designed by the subcontracting studio (such as special effects and some props).

The Crew Plan

Based on the selected methodology, using the preliminary master schedule, the next step for the producer is to build a detailed crew plan. This plan is ultimately a scheduling and budgeting tool used by the producer to determine the number of staff members needed in each category. It includes the number of weeks it will take them to produce the elements they are responsible for, and it outlines their start and end dates. The crew information is also important for the producer in terms of figuring out office space requirements. Additional items contingent on the size of the crew include production equipment, software licenses, supplies, telephone systems, parking availability, office furniture, and fixtures. Similar to the schedule, the crew plan remains in flux until the budget is finalized and the production is greenlit. As a show moves through the production process, the crew plan will be revised and updated on an ongoing basis, as it is directly linked to the cost reports generated. Once the budget is signed off on, however, the bottom line figure remains the same. The crew number however, will be shifted based on the inevitable production challenges as well as the team learning how to use their time more efficiently as they get more familiarized with the show.

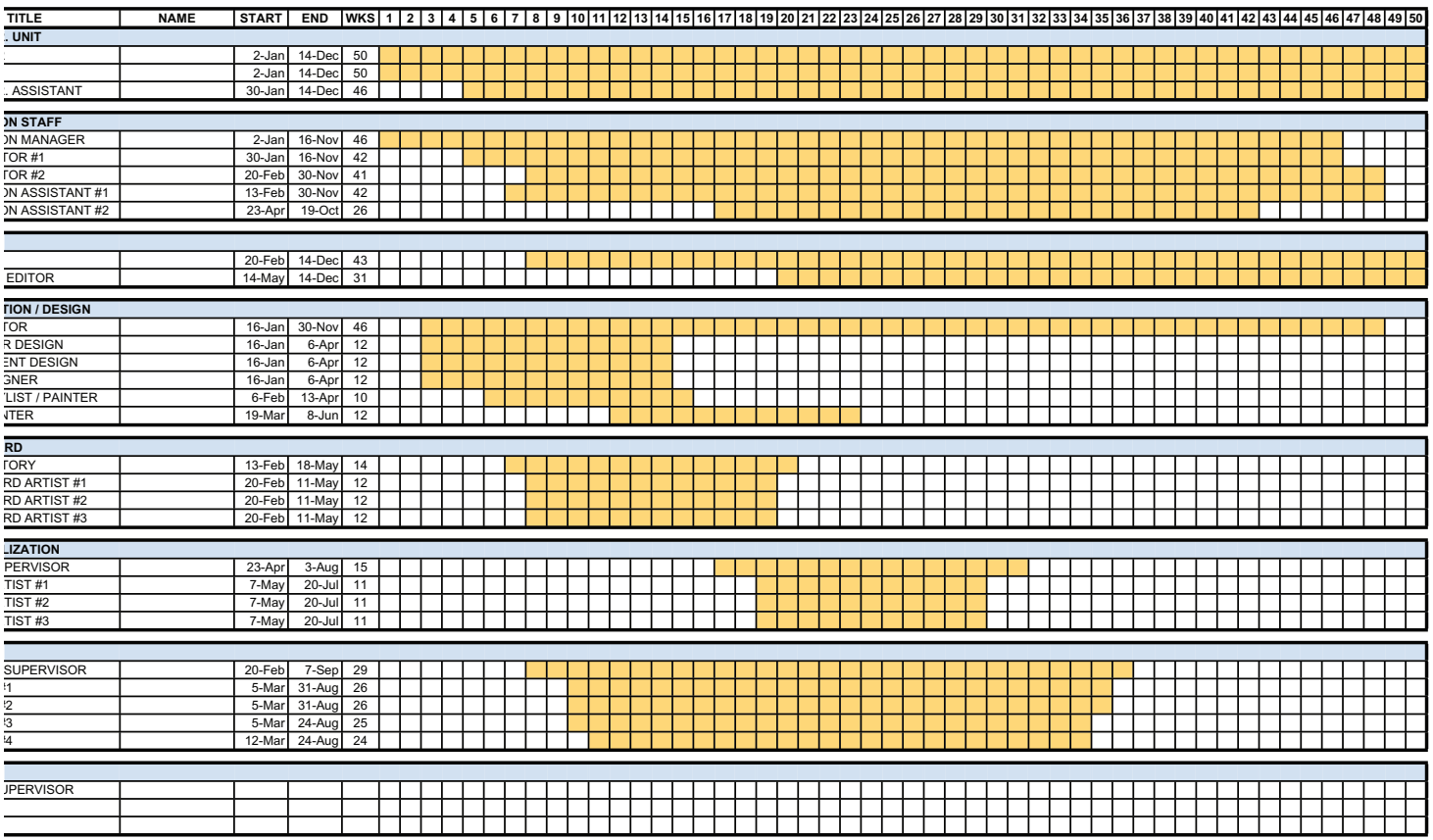
Prior to creating the budget, the producer needs to research salary rates. Salary information is drawn from a variety of sources. If a producer has worked his or her way up through the ranks, much of this information comes from a knowledge base regarding typical rates within the industry. Although an applicant's past experience and the demands of the job are key factors in determining a number, it is not always easy to come up with the right figure. Assuming that you have never produced before and you do not have access to a sample budget, you

should consider doing a little investigative work. Don't be timid about picking up the phone and asking other producers. Due to confidentiality issues, they may not be able to get too specific, but their answers should enable you to establish a range. Once you have done your research, you will be better equipped to come up with a rate that reflects the current salary for the role in question.

If you don't know other producers who can help you with a rough idea, try to get a range from the potential employees themselves. You don't need to agree to a salary. You can gather the information and talk with your core team—specifically, your recruiter and/or human resources point person—to see if it is in the appropriate ballpark. Meanwhile, the Animation Guild has salary scale minimums that must be followed by the producer if the project is a union show in Los Angeles. (See the Appendix, "Animation Resources," on the companion website for contact information.) In most cases, if the artist is experienced, he or she is typically paid above scale, and in some instances significantly more than the salary listed. In animation however—as in most industries—the rates are based on supply and demand. When the industry is booming, rates are inevitably at a premium. When it slows down, wages are adversely affected and decrease accordingly.

An important item that a producer should remember to plan for is overtime. Depending on the studio, overtime may or may not be paid. If it is paid, overtime is usually charged when weekly hours exceed the originally agreed-upon number. Anticipating long work hours, however, it is not uncommon for artists to be hired for 50- or 60-hour weeks. Because most projects get into a "crunch" or push time when overtime is necessary, money should always be allocated in each job category to account for this potential cost. A rule of thumb is that 5 to 10 percent of all applicable labor costs are overtime costs. It is common to place this money in an overtime contingency category. (See the section "Contingency" later in this chapter for more information.) Also, if the project is a union one, or if the state/provincial laws require it, the producer must allocate money for severance pay.

One final item to think about is buffer money in the area of staff hours. This money can be put toward ramp-up time as a production gets up to speed or to cover vacations and holidays. On long-term projects, production staff will need holiday time off—typically a minimum of ten days per year. Sick days should also be counted at an average of five days per year. These days are usually accounted for in the fringe added to the weekly salary. On such weeks, quotas may lag and a department may require alternative methods of making up the difference (such as freelance work or additional overtime).



TITLE	NAME	START	END	WKS
. UNIT				
		2-Jan	14-Dec	50
		2-Jan	14-Dec	50
. ASSISTANT		30-Jan	14-Dec	46
ON STAFF				
ON MANAGER		2-Jan	16-Nov	46
TOR #1		30-Jan	16-Nov	42
TOR #2		20-Feb	30-Nov	41
ON ASSISTANT #1		13-Feb	30-Nov	42
ON ASSISTANT #2		23-Apr	19-Oct	26
		20-Feb	14-Dec	43
EDITOR		14-May	14-Dec	31
TION / DESIGN				
TOR		16-Jan	30-Nov	46
R DESIGN		16-Jan	6-Apr	12
ENT DESIGN		16-Jan	6-Apr	12
GNER		16-Jan	6-Apr	12
LIST / PAINTER		6-Feb	13-Apr	10
NTER		19-Mar	8-Jun	12
RD				
TORY		13-Feb	18-May	14
RD ARTIST #1		20-Feb	11-May	12
RD ARTIST #2		20-Feb	11-May	12
RD ARTIST #3		20-Feb	11-May	12
LIZATION				
PERVISOR		23-Apr	3-Aug	15
TIST #1		7-May	20-Jul	11
TIST #2		7-May	20-Jul	11
TIST #3		7-May	20-Jul	11
SUPERVISOR		20-Feb	7-Sep	29
1		5-Mar	31-Aug	26
2		5-Mar	31-Aug	26
3		5-Mar	24-Aug	25
4		12-Mar	24-Aug	24
UPERVISOR				

Figure 6-8 Sample CG television special crew plan.

Figure 6-8 is a sample chart for a crew plan. It has been partially filled out for illustration purposes. It shows typical staffing categories and should be altered to fit the requirements of each project. The purpose of the crew plan is to illustrate the total number of weeks for each position and where they overlap. Each crew member's start and end dates and the duration of his/her job is shown as a bar graph.

The Level of Talent

It is wise to clarify the level of artistic and directorial talent that is expected on the project. The range in experience level and salaries between artists can vary drastically. It may be that the budget is set up so that a substantial sum of money is used on the initial production design, with the intention of creating a style that can be animated in a subcontracting studio without compromising quality. Another example would be to allocate funds and hire acclaimed animation artists but simplify the story so that the budget can withstand the high cost of the talent.

In terms of the voice track, the level of star talent to be pursued for the project should be established at the beginning so that it can be accommodated. A question to address at this point is whether the project can afford "A-list" stars (often considered valuable not just for their raw talent but also for publicity and marketing purposes) or whether lesser-known character or voice actors will fit the bill. In most cases, it is a combination of the two. Because the rates vary widely, this information needs to be reflected in the budget and the list of assumptions. Another item to calculate at this stage are the number of casting sessions anticipated, rehearsals (if possible) and recording days necessary. (See Chapter 8, "Pre-production," for more information on voice tracks.)

The Role of Key Personnel

In certain cases, it may be important to define areas of responsibility. In television, for example, there are often many producers on a project. It is therefore useful to define the duties to be covered by each producer so that everyone is clear as to where they must focus. Perhaps one producer handles the writing, casting, and voice track and another (usually a line producer) is responsible for the creation of all pre-production artwork and management of the production process.

Beyond the category of producers, the assignment of responsibility is useful for the entire crew and can only help the production efficiency reach its maximum level. Clear lines of authority and communication are important in enabling the crew to

perform at its best, avoiding common pitfalls and misunderstandings about what each job entails and where each title falls in the production hierarchy.

Creative Checkpoints

The producer must establish—with the buyer—the points at which they will review materials and give input before finalizing the schedule. These reviews are called *creative checkpoints*. Examples of creative checkpoints can include:

- Selection of the voice talent and composer
- Approval of script(s)
- Approval of storyboards, story reel/animatic
- Approval of main character designs

An efficient approval process is critical to the success of any project. The producer must clarify the purpose of checkpoints, establish how notes are to be handled, and allow time in the schedule to accommodate revisions or be ready to shift other segments of the production plan accordingly. (For a detailed list of creative checkpoints, see "The Producer's Thinking Map" in Chapter 2.)

Buyer's Responsibilities

The producer should clarify up front the costs that will not be covered by the budget and the buyer will be responsible for. Examples of such overages include script or design changes after the buyer has already signed off; the decision to re-cast voice talent after the track has been recorded; the addition of new elements, such as a song; and the buyer's travel costs.

Payment Schedule

A *payment schedule* is a document that outlines when the buyer is to send funds to the producing entity. This schedule is negotiated and may be broken into monthly payments or percentages based on the achievement of milestones during production. Once agreed to, the production accountant prepares this schedule with input from the producer. It is based on information obtained from the budget and schedule and is not usually prepared until the budget is finalized. The producer should keep in mind that if the buyer resides in a different country, the exchange rate or a range should be determined right from the start whenever possible. This document should also take into account any international holidays that might delay the arrival of funds. When preparing the payment schedule, all costs for each month need to be indicated in a cash flow chart. This list must

be itemized and should be inclusive of staff salaries in addition to any other fiscal expenditure anticipated for a given month. Once the numbers for all months are added up, the figure should match the grand total budgeted for the project. Whatever method of payment is determined should be outlined on the list of assumptions.

The Physical Production Plan

Once all of the previously mentioned steps have been worked out, the producer uses this information to plan for the infrastructure of the project. Understanding the methodology and the scale of the project, the producer should research overhead and facility costs, taking into account questions such as: *What parts of the production will require in-house talent and what material can be generated by freelance artists who can complete their assignments online as part of a cyber studio? Is there a pre-existing space available for the production?* If so, it may not be necessary to purchase desks and other such equipment. If not, the producer must establish what items need to be purchased, built, and installed. While evaluating the production needs, the producer—in cooperation with the technology group—researches and selects the hardware and software required. For more information on the role of the technology group, see Chapter 4, "The Core Team."

Training

If a project has special creative requirements, such as the use of a new software program or an innovative style of animation, it may be necessary to provide additional training for the crew. Consultants may need to be brought in or sent abroad when material is being subcontracted. These costs are most often allocated for high-end productions and should be provided for in the budget. (For more information on training, see Chapter 4, "The Core Team.")

Recruiting and Relocation

The costs of recruiting and relocation should be included within the production plan and are directly affected by the state of the industry in any given location. Supply and demand drive the amount of resources required for this aspect of the budget. If there is a shortage of talent where the project is to be produced, it may be necessary to hire artists from other locations. In such cases, it is common to pay for airline travel, temporary housing, transportation, moving costs, and possibly a per-diem fee while

in transit. Additionally, the production is responsible for obtaining visas and work permits when necessary.

Reference and Research Material

Depending on the scale of the production, this category may be minimal—that is, limited to Internet surfing or the purchase of a few books and DVDs—or it may involve the creation of an entire library with full-time staff. On feature productions, it is not uncommon to set up meetings for artists to meet experts or consultants and possibly get training in a specific field in order to lend more credibility to a project. If an animal is going to play a major role in the film, animators will more than likely be provided with an opportunity to get up close and personal—whether it is a lion or a falcon. Often times, field trips are set up for key production staff to visit a location similar to the one being recreated for the production in order to allow them to have firsthand experience in the environment. In all of these cases, the extent of reference material and research necessary must be analyzed from the start so that monies can be set aside for this purpose.

Archival Elements

Elements should be archived in case they are to be used for future productions, the creation of consumer product or bonus materials on DVDs, or possibly as potential revenue sources through auctions or gallery sales. It is critical that an efficient archiving system be in place—whether it is for artwork on paper, board, or digital files—so that these materials can be easily retrieved. The system should include clear demarcation of the artist's name and whether the element applies to an "in-picture" concept or one that has gone "out-of-picture." The producer should clarify from the outset who will be paying for this process. In most cases, costs associated with archiving and storing the artwork are separate from the production budget and are paid for by the buyer upon the completion of production.

Physical elements to be archived include:

- Artwork on paper (such as conceptual work, designs, storyboards, and animation artwork)
- Any traditionally painted materials (such as backgrounds)
- Maquettes (physical models of characters) or practical set/prop models

These elements should be protected for historical legacy in a temperature controlled environment, and stored by using clean archival chipboard and other acid-free lining papers and organizers between the pieces. There should be no rubber bands, staples

or stick-notes attached to the artwork, as these will degrade and ruin the preserved materials over time.

Digital files must also be archived for potential future use. Types of files that should be considered for archiving include:

- Visual development artwork
- Character and color models
- Story panels
- Pre-vis set ups
- Editorial cuts (from checkpoint screenings)
- Assets in different stages of geometry, rigging, texture
- Layouts/shot setup
- Final animation
- Final assets
- Final lighting
- Backgrounds and matte paintings
- Reference video

Keep in mind that because technology can change rapidly, some digital elements may not serve as functional assets through future software options. Innovations in software may actually make the recreation of elements such as models, rigs, and shaders a more efficient choice than trying to resurrect an older version, even when reusing the very same character in a sequel project.

Contingency

The contingency is a pot of money that is separate from the production budget. Typically, the amount ranges from 5 to 10 percent of the budget. Although it is advisable to have a contingency, not every production can afford this cost. For those productions that can, there are usually two main purposes as to when and how this money is spent. The first includes instances in which it is necessary to cover costs for unexpected production problems. The other is to cover the costs of creative changes that are above and beyond final and signed-off materials.

In terms of unexpected production problems, it is not uncommon for the pipeline to break down. Although producers try to do everything in their power to plan for all costs, there can be a multitude of unexpected issues that unfold and challenge a production. When unanticipated issues arise, the producer judiciously taps into the contingency money to cover the costs. An example of a situation warranting the use of the contingency is a project on which new processes are being tried, such as in a newly created CG production pipeline. In such a case, system errors can have a significant effect on the pipeline, forcing the production

to shut down in order to solve the problems. A system shutdown can result in a loss of digital work and time in the schedule. If artists are unable to work due to computer malfunction, they must make up the missed time.

Although elements and materials are signed off on and finalized during production, the creative process cannot always be controlled. It may be that someone comes up with a fantastic idea that needs to be implemented and that could elevate the project to a higher level of quality and—hopefully—success. Perhaps what appeared to be a good read in script form is not working out as well when it is brought into the visual medium, requiring additional time and focus in the story department in order to solve issues that have become clear in the story reel. Or it may be necessary to re-cast a voice actor for a lead character. Under these circumstances, shots that were already animated may need to be reworked, and this work—along with re-casting and re-recording—can be costly. Another common reason for creative changes is audience or buyer feedback. If a show is tested and gets feedback that justifies re-examining certain creative issues, further refinements will more than likely be necessary. Shots may need to be added or deleted to clarify a key plot point, for example. The costs of unanticipated creative changes such as these must be covered, and in most cases the contingency is used for this type of expenditure. It should be noted that for most features, creative changes are anticipated up front as part of the process. The scope of the changes, however, is unknown, and therefore it is simpler to set contingency funds aside, knowing that they will be used for creative improvements throughout the production.

Depending on the budget of the project, the contingency can be a significant amount of money. The key to successful use and control of the contingency is to clarify up front the parameters surrounding its use. A system should be designed that defines who has the ultimate authority over spending the money and how approvals are obtained. In most cases, prior to spending any of the monies, the producer budgets the anticipated costs as closely as possible and how they will be spent to cover the overage. This breakdown is then given to the final authority—in most cases, the buyer/executive—for approval.

Building the Budget

Once all of the previously mentioned information has been gathered and a preliminary schedule and crew plan are in place, the producer can begin the task of building the budget.

Budgeting is truly an art, as there are so many aspects to consider and balance in order to come up with an optimal plan. Figuring out the total amount for a budget is a methodical process. In some cases, a producer may be provided a target number by the buyer that is all-encompassing. In this instance, the budget should essentially be reverse-engineered to meet the desired number. In other cases, a producer is given nothing and therefore needs to do his or her best to determine the right number based on the estimated number of manweeks per department or the crew plan, the schedule and the list of assumptions.

There are two levels to a budget: *summary* and *detail*. The *summary budget* groups the line items into major categories simply to illustrate where the money is allocated from a macro point of view. On the summary sheet, for example, there is one line devoted to the "storyboard" category, and next to that is a sum total of costs for this phase of production. The summary budget is usually no more than two pages. The *detail budget* is further divided into labor for the category (i.e., head of story, storyboard artist, storyboard cleanup artist), supplies, equipment, and fringe benefits. Each item has its own separate dollar amount listed, with the sum total matching the number under "storyboard" in the summary budget.

Most budgets are divided into two sections: above the line and below the line. The above-the-line numbers are commonly those numbers based on contracts. These numbers include rights payments, options, royalties, and script fees. Also included are deals and payments to be made to producers, directors, and writers, as well as any other key talent associated with the project (such as actors). These figures are considered the creative costs of the production. The below-the-line items are all other monies required to produce the project, such as the crew, equipment, subcontractors, and so on. Such expenses are generally fixed in terms of what the production itself will cost in order to be completed. The distinction is made between the two categories because some of the above-the-line costs may be deferred. Above-the-line talent often participate in back-end profits or have *points* (a percentage of the producer's profits after all other expenses are covered and investors repaid) or receive bonuses based off of box office success. It also makes it easier for executives to review the budget and assess the differences between the lead creative fees and actual nuts-and-bolts production costs.

The producer also needs to establish what the fringe benefits (or fringes) will be for the project so that they can assign these costs throughout the budgeting process. Fringes are those costs above and beyond the actual contracted or purchase price of an

item. Standard items are guild and/or union pensions, health and welfare contributions, employer matching contributions, Medicare, unemployment taxes, and so on. Fringe rates must be paid. Depending on the studio, these rates can range between 33–35% of gross labor costs. The percentage charged for each individual item varies depending on the location of the studio, benefits provided, and whether it is union or non-union. Table 6-2 lists a number of standard fringe payments that must be tailored to the specific production.

Chart of Accounts

The *chart of accounts* is used as a base template for building a budget. Figure 6-9 shows an all-encompassing chart of accounts that can be utilized for CG and 2D (including traditional and digital) projects, plus costs associated with creating stereoscopic production. It lists line items—including personnel, equipment, and so on—to be budgeted for and their respective account codes (e.g., 0200 Producer's Unit). These account codes are also used by the production accountant and crew to assign and track costs for each line item within cost reports. Depending on the studio, there may already be a standard numbering system in place, or the producer may need to create or modify one. No matter how a project is produced, the purpose of having all items included in the chart of accounts is to remind the producer of all potential costs to be incurred on the production. As with all templates in this book, the producer should tailor the information to suit his or her particular production requirements.

Table 6-2 Sample Fringe Payments

Employer Contributions	Amount paid by employer for employee's taxes, withholding, benefits, etc.
Handling Charges	Fees paid to payroll services
FICA	Federal Insurance Contribution Act: Disability & Medicare)
FUI	Federal Unemployment Insurance
FUTA	Federal Unemployment Tax Act
SUI	State Unemployment Insurance
Workers' Compensation	
Health Insurance	
Pension	
Individual Account Plan	

There are different ways to create a budget. For example, you can build your own spreadsheets using software such as Microsoft Excel, or you may use one of many budget-specific software applications on the market.

Cost Reports

The production accountant, along with the producer, issues *cost reports.* Cost reports are a financial overview of the status of the project and how the numbers for each category are tracking in comparison to the original budget. Also referred to as *variance* or *estimates of final costs (EFCs),* these reports are used to evaluate the financial status of the budget on an ongoing basis. They are created from the final signed-off budget and schedule and are distributed to key personnel for evaluation. The weekly analysis of the cost reports enables the producer to efficiently navigate the production, shifting resources as necessary in order to facilitate the creative vision while keeping the project on track and on time. (For further information on accounting, see Chapter 4, "The Core Team.")

CHART OF ACCOUNTS

Account	Description	Account	Description	Account	Description
		0100	**STORY FEES & SCRIPT DEVELOPMENT**		
0101	Writer(s) - Script Fees	0102	Writer(s) - Bible Fees	0103	Story Editor
0104	Script Consultants	0105	Script Coordinator	0106	Secretary
0107	Option Fees	0108	Rights Payments	0109	Bonuses
0110	Royalties	0111	Clearance Fees	0112	Copyright Fees
0113	Script Copy Fees	0114	Research & Reference Materials	0115	Final Continuity Script
0116	Title Registration Fees	0117	Travel & Accommodations	0118	Fringe Benefits
		0200	**PRODUCER'S UNIT**		
0201	Executive Producer	0202	Producer	0203	Co-Producer
0204	Line Producer	0205	Associate Producer	0206	Producer's Assistant
0207	Travel & Accommodations	0208	Entertainment	0209	Fringe Benefits
		0300	**DIRECTOR'S UNIT**		
0301	Director	0302	Supervising Director	0303	Animation Director
0304	Co-Director	0305	Sequence/Episode Director	0306	Assistant Director
0307	Director's Assistant	0308	Travel & Accommodations	0309	Entertainment
0310	Fringe Benefits				
		0400	**CASTING & RECORDING**		
0401	Principal Cast	0402	Supporting Cast	0403	Casting Director
0404	Dialogue Director	0405	Welfare Worker/Teacher	0406	Vocal Coach
0407	Casting Coordinator/Assistant	0408	Recording Studio	0409	Editing
0410	ADR Recording	0411	Loop Group	0412	Cast Exams
0413	Video Equipment Rental	0414	Materials & Supplies	0415	Working Meals
0416	Mileage/Parking	0417	Travel & Accommodations	0418	Fringe Benefits
			TOTAL ABOVE THE LINE		
			PRODUCTION STAFF		
0501	Production Manager	0502	Production Supervisor	0503	Post-Production Supervisor
0504	Assist. Prod. Mgr./Prod. Dept. Mgr.	0505	Production Coordinator	0506	Post-Production Coordinator
0507	Production Assistant	0508	Post-Production Assistant	0509	Production Secretary
0510	Production Accountant	0511	Production Consultant	0512	Temporary Assistant
0513	Materials & Supplies	0514	Equipment Rentals	0515	Working Meals
0516	Overtime	0517	Fringe Benefits		
		0600	**ART DIRECTION & VISUAL DEVELOPMENT**		
0601	Production Designer	0602	Art Director	0603	Visual Effects Supervisor
0604	Stereoscopic Supervisor	0605	Visual Development Artist	0606	Character Designer
0607	Location Designer	0608	Prop Designer	0609	EFX Designer
0610	Background Painter	0611	Color Stylist	0612	Graphic Designer
0613	Sculptures/Maquettes	0614	Research & Reference	0615	Travel & Accommodations
0616	Materials & Supplies	0617	Overtime	0618	Fringe Benefits
		0700	**STORYBOARD**		
0701	Head of Story	0702	Storyboard Artist	0703	Storyboard Revisionist
0704	Storyboard Cleanup Artist	0705	Materials & Supplies	0706	Overtime
0707	Fringe Benefits				
		0800	**SONG**		
0801	Song Producer	0802	Song Composer	0803	Lyricist
0804	Conductor	0805	Orchestrator/Arrangement Fees	0806	Copyists/Proofreaders
0807	Singers/Chorus	0808	Song Coach	0809	Musicians
0810	Music Editor	0811	Original Song Purchase	0812	Song Copyrights
0813	Demos	0814	Instrument Cartage	0815	Instrument Rentals
0816	Studio Session Fees	0817	Travel & Accommodations	0818	Overtime
0819	Fringe Benefits				
		0900	**EDITORIAL**		
0901	Editor	0902	Associate Editor	0903	Assistant Editor
0904	Apprentice Editor	0905	Dialogue Editor	0906	Timing Director/Slugging
0907	Sheet Timer	0908	Track Reader	0909	Editorial Equipment
0910	Materials & Supplies	0911	Hardware & Software	0912	Overtime
0913	Fringe Benefits				

Figure 6-9 Chart of accounts.

CHART OF ACCOUNTS

Account	Description	Account	Description	Account	Description
			CG PRODUCTION		
		1000	**CG MODELING**		
1001	Modeling Supervisor	1002	Modeling Lead	1003	Character Modeling
1004	Set Modeling	1005	Props/EFX Modeling	1006	Stock Model Fee
1007	Overtime	1008	Fringe Benefits		
		1100	**CG RIGGING**		
1101	Rigging Supervisor	1102	Lead Rigger	1103	Character Rigger
1104	Set Rigger	1105	Props/EFX Rigger	1106	Overtime
1107	Fringe Benefits				
		1200	**CG SURFACING**		
1201	Surfacing Supervisor	1202	Surfacing Lead	1203	Surfacing Artist
1204	Digital Painter	1205	Overtime	1206	Fringe Benefits
		1300	**CG PRE-VISUALIZATION**		
1301	Director of Photography	1302	Stereoscopic Supervisor	1303	Pre-Vis Supervisor
1304	Pre-Vis Lead	1305	Pre-Vis Artist	1306	Overtime
1307	Fringe Benefits				
		1400	**CG LAYOUT / SHOT SETUP**		
1401	Layout/Shot Setup Supervisor	1402	Layout/Shot Setup Lead	1403	Layout/Shot Setup Artist
1404	Overtime	1405	Fringe Benefits		
		1500	**CG ANIMATION**		
1501	Animation Supervisor	1502	Animation Lead	1503	Animator
1504	Supervising Technical Animator	1505	Lead Technical Animator	1506	Technical Animator
1507	Overtime	1508	Fringe Benefits		
		1600	**CG SET DRESSING / FINAL LAYOUT**		
1601	Set Dressing/Final Layout Supervisor	1602	Set Dressing/Final Layout Lead	1603	Set Dressing/Final Layout Artist
1604	Overtime	1605	Fringe Benefits		
		1700	**CG EFFECTS**		
1701	Effects Supervisor	1702	Lead Effects Animator	1703	Effects Animator
1704	Overtime	1705	Fringe Benefits		
		1800	**CG MATTE PAINTING**		
1801	Matte Painting Supervisor	1802	Lead Matte Painter	1803	Matte Painter
1804	Overtime	1805	Fringe Benefits		
		1900	**CG LIGHTING & COMPOSITING**		
1901	Lighting & Compositing Supervisor	1902	Lighting & Compositing Lead	1903	Lighter & Compositor
1904	Rendering Supervisor	1905	Render Wrangler	1906	Overtime
1907	Fringe Benefits				
		2000	**TECHNICAL DIRECTION**		
2001	Chief Technical Director	2002	Senior Technical Director	2003	CG Supervisor
2004	Technical Director	2005	Assistant Technical Director	2006	Technical Assistant
2007	Animation Technology	2008	Systems Engineering	2009	Technical Resource Administrator
2010	Overtime	2011	Fringe Benefits		
		2100	**SOFTWARE RESEARCH & DEVELOPMENT**		
2101	Director of Software	2102	Lead Software Developer	2103	Software Developer
2104	Consultant	2105	Purchases	2106	Maintenance Contracts
2107	Overtime	2108	Fringe Benefits		
		2200	**HARDWARE / SOFTWARE**		
2201	Workstations	2202	Render Farm	2203	Digital Disk Recorder
2204	Server	2205	Installation Fees	2206	Rentals
2207	Scanners	2208	Networking Equipment	2209	Maintenance Contracts
2210	License Fees	2211	Digital Storage		
		2300	**SYSTEMS ADMINISTRATION**		
2301	Systems Administrator Supervisor	2302	Systems Administrator	2303	Audio Visual Engineer
2304	Overtime	2305	Fringe Benefits		

Figure 6-9 (Continued).

CHART OF ACCOUNTS

2D PRODUCTION: TRADITIONAL & DIGITAL

Account	Description	Account	Description	Account	Description
		2400	**2D LAYOUT**		
2401	Layout/Workbook Supervisor	2402	Workbook Artist	2403	Layout Artist
2404	Assistant Layout Artist	2405	Materials & Supplies	2406	Overtime
2407	Fringe Benefits				
		2500	**2D SCANNING**		
2501	Scanning Supervisor	2502	Line Art Scanner	2503	Color Scanner
2504	Overtime	2505	Outside Labor	2506	Fringe Benefits
		2600	**2D SCENE PLANNING / SHOT SETUP**		
2601	Scene Planning Supervisor	2602	Scene Planner	2603	Shot Setup
2604	Materials & Supplies	2605	Overtime	2606	Fringe Benefits
		2700	**2D ANIMATION**		
2701	Animation Supervisor	2702	Animation Lead	2703	Animator
2704	Assistant Animator	2705	Asset Builder	2706	Inbetweener
2707	Materials & Supplies	2708	Overtime	2709	Fringe Benefits
		2800	**2D CLEANUP ANIMATION**		
2801	Cleanup Animation Supervisor	2802	Lead Key Cleanup Artist	2803	Key Cleanup Assistant
2804	Cleanup Assistant	2805	Cleanup Breakdown Artist	2806	Cleanup Inbetweener
2807	Materials & Supplies	2808	Overtime	2809	Fringe Benefits
		2900	**2D EFFECTS**		
2901	Effects Supervisor	2902	Effects Animator	2903	Effects Assistant Animator
2904	Materials & Supplies	2905	Overtime	2906	Fringe Benefits
		3000	**2D BACKGROUNDS**		
3001	Background Supervisor	3002	Background Artist	3003	Materials & Supplies
3004	Overtime	3005	Fringe Benefits		
		3100	**2D ANIMATION CHECK**		
3101	Animation Checking Supervisor	3102	Animation Checker	3103	Materials & Supplies
3104	Overtime	3105	Fringe Benefits		
		3200	**2D COLOR STYLING AND INK & PAINT**		
3201	Color Styling Supervisor	3202	Color Stylist	3203	Ink & Paint Supervisor
3204	Ink & Paint Artist	3205	Materials & Supplies	3206	Overtime
3207	Fringe Benefits				
		3300	**2D COMPOSITING**		
3301	Compositing Supervisor	3302	Compositor	3303	Overtime
3304	Fringe Benefits				
		3400	**2D FINAL CHECK**		
3401	Final Check Supervisor	3402	Final Checker	3403	Materials & Supplies
3404	Overtime	3405	Fringe Benefits		
		3500	**SUBCONTRACTORS**		
3501	Production Fee	3502	Test(s)	3503	On Time Bonus
3504	Overseas Supervisor Salary	3505	Overseas Supervisor Per Diem	3506	Overseas Supervisor Travel
3507	Overseas Supervisor Accommodations	3508	Other Charges	3509	Fringe Benefits
		3600	**OTHER PRODUCTION COSTS**		
3601	Finance	3602	Studio Operations	3603	Recruiting
3604	Training	3605	Research Materials	3606	Archiving
3607	Storage	3608	Insurance	3609	Incorporation Fees
3610	Legal Fees	3611	Severance Fees	3612	Furniture
3613	Equipment	3614	Office Supplies	3615	Copiers
3616	Utilities	3617	Telephone	3618	Cell Phone
3619	Internet	3620	Repair & Maintenance	3621	Dues & Subscriptions
3622	Working Meals	3623	Janitorial Services	3624	Technical Expendables
3625	Wrap Party	3626	Crew Gifts		
		3700	**TRANSPORTATION & SHIPPING**		
3701	Courier	3702	Mileage	3703	Fuel
3704	Taxis & Limousines	3705	Postage	3706	Freight Charges
3707	Custom Broker & Fees	3708	Materials & Supplies		

Figure 6-9 (Continued).

CHART OF ACCOUNTS

Account	Description	Account	Description	Account	Description
		3800	**CREW TRAVEL**		
3801	Airfares	3802	Accommodations	3803	Ground Transportation
3804	Per Diem				
		3900	**VIDEO**		
3901	On-Line Editing	3902	Color Correction	3903	Duplication
3904	Masters	3905	Element Reel	3906	Character Generator
3907	Transfers	3908	Materials & Supplies		
		4000	**FILM & LAB / DIGITAL INTERMEDIATE**		
4001	Digital Intermediate	4002	Convergence (3D)	4003	Color Grading/Color Timing
4004	Film Recording	4005	Film Development/Tests	4006	Answer Print
4007	Composite Check Print	4008	Interpositive	4009	Internegative
4010	Film Stock	4011	Digital Negative	4012	Digital Cinema
4013	Protective Master	4014	Release Print	4015	HD Master
4016	Materials & Supplies				
		4100	**TITLES & OPTICALS**		
4101	Title Design	4102	Main & End Titles	4103	Bumpers
4104	Interstitials	4105	Credits	4106	Film Test(s)
4107	Subtitles	4108	Closed Captioning		
		4200	**MUSIC**		
4201	Music Supervisor	4202	Music Producer	4203	Music Editor
4204	Composer	4205	Conductor	4206	Musicians
4207	Orchestrator/Arrangement Fees	4208	Copyists/Proofreaders	4209	Music Clearance
4210	Licensing Fee	4211	Instrument Rentals	4212	Instrument Cartage
4213	Studio Session Recording Fees	4214	Demos	4215	Other Charges
4216	Travel & Accommodations	4217	Overtime	4218	Fringe Benefits
		4300	**POST-PRODUCTION SOUND**		
4301	Sound Supervisor	4302	Sound Designer	4303	Sound Effects Editor
4304	ADR Supervisor	4305	Dialogue Editor	4306	Foley Supervisor
4307	Foley Editor	4308	Recording Studio	4309	Temp Dubs
4310	Final Re-recording Mix	4311	Foreign M & E Mix	4312	Optical Track Negative
4313	Sound Package	4314	Equipment	4315	Working Meals
4316	Sound Effects Purchase	4317	Audio Transfers	4318	Supplies
4319	Other Charges	4320	License Fee - Dolby Digital	4321	License Fee - SDDS
4322	License Fee - DTS	4323	License Fee - SR	4324	License Fee - SRD
4325	Travel & Accommodations	4326	Overtime	4327	Fringe Benefits
		4400	**SCREENINGS / PREVIEWS**		
4401	Projectionist	4402	Facility Charges	4403	Audience Testing Fees
4404	Preview Expense Miscellaneous	4405	MPAA Rating Administration Fee	4406	Catering Costs
4407	Travel & Accommodations	4408	Fringe Benefits		
		4500	**PUBLICITY**		
4501	Publicist	4502	Website	4503	Digital Marketing
4504	Travel & Accommodations	4505	Entertainment	4506	Fringe Benefits
		4600	**CONTINGENCY**		
4601	Percentage of Budget				
		4700	**OVERHEAD ALLOCATION**		
4701	Studio Fee	4702	Human Resources	4703	Executives
4704	Render Farm	4705	Rent		

Figure 6-9 (Continued).

7

THE PRODUCTION TEAM

The Role of the Producer in Structuring the Production Team

As an animation producer, building the crew is an opportunity to put together the ideal combination of people to create something spectacular. Hiring a team for an animated project does not happen all at once because not everyone is needed at the same time. As a result, start dates and end dates are staggered in concert with the production plan. Unlike live action filmmaking, there is no one moment at which cast and crew work on the same scene simultaneously. The staff's work is typically segmented, as each asset and/or shot proceeds from one department to the next. (See Chapter 6, "The Production Plan," for more information on putting together a crew plan.) The producer paces the production in terms of the number of artists and production staff needed based on the budget, schedule, and creative requirements of the project, which is more easily said than done because projects are always in a state of flux. Initially, he or she has to handpick a core creative team to develop and launch the project. At the same time, a production crew is needed to support the artistic vision and to keep the show on track. As important as it is to provide ample resources for exploratory conceptual work, the producer must balance the budget so that the project's production quality is never compromised because of overages in the development stage.

One major difference between feature production and television series is their staffing needs. Budget, creative process, delivery date, and final format all greatly influence the number of staff and particular roles required to complete a project. For qualitative reasons, most large-scale features are produced in-house. This methodology puts the producer in the position of having to identify and hire upwards of 200 staff members although in the case of the major studios, many of the artists and production crew are already on staff. On lower-budget projects such as television or direct-to-DVD, producers typically subcontract the production portion of the process, setting up an in-house team to

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handle pre-production and post-production. In order to create a pre-production team for these types of shows, the producer hires approximately 15 to 35 people for the in-house crew, with the bulk of the production crew employed by the subcontractor. It is up to the producer to determine the best crew configuration to generate the pre-production content and select the ideal subcontracting studio for the production phase.

The producer hires a subcontractor for budgetary reasons and/or to help make up for shortfalls (to keep from falling behind schedule, for example). If subcontractors are to be involved in pre-production work, it is important that the producer researches their availability and talent prior to the project being greenlit. The compatibility of the technology and pipeline between the production and the subcontractor must also be considered, as this can greatly affect workflow. This preplanning prevents complications and provides assurances that "all systems are go" as soon as the producer requires their services. When a subcontractor is involved in some or all of the production phase, the producer should put a deal in place as early as possible during pre-production to ensure that materials are created to suit the subcontractor's needs. (The drafting of a subcontractor deal is discussed in greater detail later in this chapter.)

As the project gets closer to being greenlit, the producer starts the search for personnel needed. Depending on the size of the studio, there may or may not be a recruiter available to help in the hiring process. (See Chapter 4, "The Core Team," for more information on recruiting and training.) If there is no recruiter, the producer usually contacts individuals with whom he or she has worked before to solicit recommendations. The formal announcement of a production starting is commonly advertised online and in print through industry trades and animation magazines; however, word of mouth is the most common method of "crewing up." All studios use websites and job lines to post the details of available positions and whom to contact.

When the production funds are in place and the producer can start hiring, he or she partners with the director and/or the key executives to look at the creative team as a whole and make sure that all members are a good match for the project. Specific skills are necessary for each job category. For example, the most important aspect in evaluating storyboard artists is their ability to tell a story visually. You can make this assessment while reviewing their portfolios. As you look at their artwork, you should also be comparing their style to that of the show. Perhaps they are flexible and can handle a range of projects, or maybe their expertise can best be tapped for a particular genre, such as comedy. Another significant issue to keep in mind is the artist's

capability in terms of speed and output. If the director or producer has had no previous experience with the artist, the answer to this question may require checking references.

The next consideration is how to build the story team with board artists who complement each other. Some artists are able to spell out each scene down to the last possible detail, while others tend to focus primarily on the acting. The tendency is to have both types of artists on a show so that they can address the key moments of the story as well as illustrate how the characters interact. Finally, it is almost an animation tradition to develop future talent by having interns work alongside experienced artists. This method helps the less experienced artist see firsthand what type of ideas work and how they are executed. Even if interns may not be able to contribute directly to the show, they are an important asset to future projects. (For a detailed description of the artistic staff and their duties, see Chapter 8, "Pre-production," and Chapter 9, "Production.")

Because it is crucial for the producer to delegate responsibility, it is vital for him or her to trust the leadership hired. When selecting supervisors, key artistic staff, and production personnel, it is highly consequential to hire individuals who are experienced in their respective roles. By choosing people who confidently know the ins and outs of their positions, you will be able to run the project efficiently. The producer can create a fantastic mix of talent when selecting a crew comprised of both experienced pros and newcomers, as the combination of experience and enthusiasm is invaluable. An ideal team should be made up of senior artists who can lend an extra hand if production problems arise, and new talent should be paired up with more experienced artists who can teach them along the way. In some instances, the producer may be faced with a dilemma. He or she may come across an extraordinary talent who can make all the difference to the success of the project but insists on joining the team only if hired as a supervisor. If that is the case, the producer may choose to set up an internal structure to support the first-time supervisor, as extremely talented artists may not embody all of the skills required to run a department as well.

When assembling the production crew and the artistic team, the producer should aim to create and maintain a positive chemistry within the group. Just like any other collaboration, animation requires the talent of many different types of people who have to work well with each other and communicate effectively. The artistic team, the technologists and management group, if not mutually respectful of each other's roles, can find themselves locked in a never-ending battle. Artists may think that the schedule is unrealistic and feel they are treated as though they are forced labor, for

example. On the other hand, the production staff may believe that they have to act like they are running a boot camp or the project will never get done. This kind of negative approach toward work often results in sapping the production of its creative juices and lowering morale. The producer is the individual responsible for rectifying these kinds of problems, and damage control must be immediate.

Although possessing artistic and organizational skills are important assets for the production staff to have, the producer must make sure that the individuals hired are also good communicators. The key to running a top-notch production is communication. You can never overcommunicate. Informing and updating everyone about their shared goals and—most important—the means to get there is key to success. Unless the producer actively works on ensuring that everyone is clear on the vision and provides context and goals, thereby creating a strong team spirit, the production can quickly get derailed. Probably the most effective means of creating a good working atmosphere is making sure that the crew knows that they have an outlet through which they can communicate. If the producer's schedule or style doesn't allow him or her to be accessible, the producer should be sure to hire an associate producer or production manager who is available to the staff at all times. If the staff know that they have a voice and are treated with respect by the leaders of the project, they will do all they can to put forth their best efforts for the production.

Once it is established that an individual is to be hired, negotiations begin. Negotiations for most above-the-line or high-end talent such as directors and producers are handled by the business affairs department. (For more information on the business affairs department, see Chapter 4, "The Core Team.") For non-contract personnel, the producer, a recruiter, or—at a larger studio—a production executive handles the negotiations. In some cases, the associate producer or production manager is involved, especially for freelance artists and production staff. If a contract is not necessary for the new hire, a *deal memo* should be put together by the producer. Deal memos are very useful, in that they outline important details such as:

- Salary
- Terms of agreement
- Start date
- Job title
- Reporting structure
- Confidentiality agreements
- Credit

Up-front clarity regarding a position is a form of proactive troubleshooting. By establishing this information prior to an

employee starting work, any possible discrepancies can be dealt with quickly.

While a production is in progress, it is crucial that the producer monitors the hiring process very carefully. When a production gets off track, it is important to adjust the crew plan and hire accordingly so as to avoid wasting resources. In studios where the staff are already hired and slated to go onto the production by a specific date but the project is not ready, the producer must collaborate with the production executive and find solutions to delay the start of the artists on their budget. One scenario is to loan the artists to other productions, either in-house or at other studios. Another method may be to confer with the artists and see whether they are agreeable to a later start date and/or are willing to work shorter weeks so that there is less impact on the budget. When there is no other solution, the producer may have no choice but to take the risk that the talent won't be available when actually needed and let the artist go or abide by the previously agreed-upon start date and put in the best effort to get useful materials created in this "downtime." Depending on how far behind the project may be, the producer needs to then strategize on how to make up for this lost time. Possible solutions include the hiring of additional artists on a freelance basis, allocating money for overtime, or simplifying the story and finding a means to reduce the artwork needed. This reshuffling of resources is constant throughout all stages of production.

The producer also has to be direct with crewmembers when end dates approach. It is extremely difficult to inform the crew that within a short time they will be out of a job; however, it is important to give the staff the information they need to plan for their lives. Inevitably, the last weeks of a show are when the highest quotas need to be met. In order to make up for the lost time, the artists are required to do more work so that deadlines can be met. Telling artists their end dates during this time period can diffuse their enthusiasm for the project and they may spend time and energy looking for another job instead of focusing on completing their assignment. Experienced artists however, know that end dates are part of any job and that fulfilling their part of the bargain is a necessity. After all, chances are good that you will be working together again and it is important not to have a tarnished record.

Department Supervisor/Lead

On higher-budget productions, artistic leads are selected from each department to guide the team and oversee its work. The department supervisor works with the director and, when applicable, the visual effects supervisor, and the production designer/art director in order to get input on the creative expectations of the

show. These supervisors work for the director on creative issues and collaborate with the production manager on all production-related topics. The department supervisors are usually hired prior to the start of their department so that they can explore and establish the look and process of the project and be involved in selecting their team members. They are responsible for assigning work to the artists in their department. They attend director approval sessions, weekly production meetings, sequence turnovers, and dailies. At the production meeting, department supervisors are expected to provide the producer, the director, the associate producer, other artistic leads, the production manager, and APMs/PDMs with an up-to-date report on their departments. At this meeting, they can also express production concerns that pertain to the show in general. Department supervisors should also hold weekly meetings with their own teams to update them on how the project is progressing and to discuss inter-departmental concerns.

When it comes to facilitating the handout and completion of artwork the supervisor and the production department manager work together to plan and schedule for the department. Taking weekly targets into account, along with the complexity of work and the individual staff available to do the work, they strategize on how to allocate assignments. Each approaches this challenge from his or her own point of view, collaborating to find the best solution to ensure that both the creative and administrative needs of the project are met. Together they work with the individual artists to find a suitable due date for assignments that stays within the budgeted number of hours available.

Something to keep in mind when choosing a supervisor is that there is often a tendency to select the most prolific and/or talented artist for the role of the department head. Because this position requires the individual to attend numerous meetings and work one-on-one with their crew in order to help them solve problems, you must realize that these individuals are the least likely to get anywhere near the drawing board or computer and produce artwork. For this reason, it is probably more beneficial to choose an artist who is highly experienced, is well-respected among his or her peers, and has strong interpersonal and administrative skills.

The Production Management Crew

A producer's management crew or production staff performs a vital part in keeping the project together and moving it forward. On lower-budget projects, this group is usually limited to a few

key individuals. These include the production manager and a handful of coordinators and production assistants. Because of this limited size, the ability to wear multiple hats is a necessity for these roles. On features, there can be upwards of 15 individuals making up the production management team; as such, their responsibilities are much more specialized. The production manager has a dedicated production person—often titled production supervisor, assistant/associate production manager (APM), production department manager (PDM), production coordinator, or production assistant (PA)—in almost every department supporting that specific step of the animation process.

When hiring a production crewmember, there are a few ground rules to follow. In general, the crewmember should have:

- Previous animation experience (necessary for both production managers and coordinators/APMs/PDMs and preferred in production assistants)
- Strong interpersonal skills
- Excellent communication skills
- Enthusiasm for the job
- The ability to prioritize
- The ability to ask questions and get guidance
- Strong organizational skills
- An aptitude for problem solving and troubleshooting
- Attention to detail
- Data input and production tracking skills
- A proficiency at delegating (if in a managerial position)
- The ability to follow through on action items
- A goal-oriented attitude

Figure 7-1 is an overview of the management personnel that constitute "The Producer's Team."

The Production Manager

The production manager is usually hired at the onset of preproduction and—may continue through post-production. This position reports directly to the producer and—based on how the project is set up—to an associate producer or hands-on production executive. (For a discussion on the role of the associate producer, see Chapter 2, "The Animation Producer.") Depending on the size and scope of the project and how it is structured, most of the various production staff including PAs, coordinators, and APMs/PDMs are accountable to the production manager, whether they report in to that person directly or indirectly.

The production manager essentially functions as the producer's right hand and is directly responsible for managing the details of production in order to keep the project on track. The

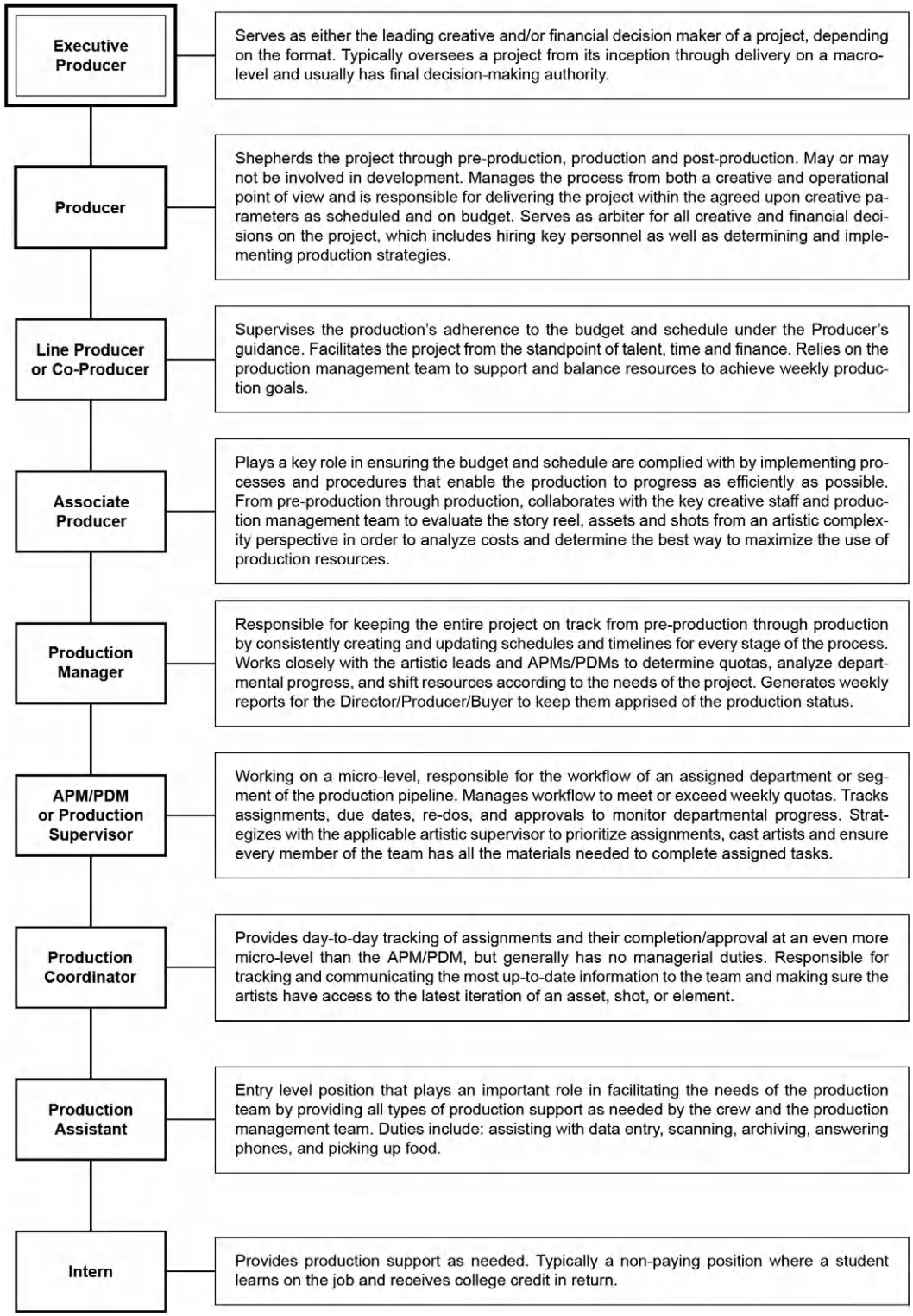


Figure 7-1 The Producer's Team.

production manager assists the producer in creating the master schedule and all departmental micro-schedules. (See Chapter 6, "The Production Plan," for sample master schedules and Chapter 11, "Tracking Production," for sample tracking charts.) When changes such as script revisions are made to the project, the production manager modifies the schedule with input from the producer. Additionally, the production manager creates and maintains weekly production status reports. Establishing priorities and communicating information to the staff are integral parts of this role.

When dealing with a subcontractor, the production manager makes certain that all the material that is made available online or shipped digitally is exact, reflecting the agreed-upon specifications. Prior to posting or sending out artwork, he or she must review the contents of the package in order to make sure that all of the required pieces are included. Ideally, a shared tracking system is set up so that the progress on the work at the outside facility can be closely monitored. Typically, all artwork ready for review is made available online in order to generate consistent communication both on the quality of work and its progress. At the same time, the production manager needs to ensure that domestic studio staff is accountable and accessible to the subcontracting team for any questions. Upon obtaining the producer's approval, the production manager provides additional material when requested. If the subcontracting studio is in need of information on structuring the production from an administrative point of view, the production manager may be asked to travel to the facility to offer onsite training.

On a project that is animated in-house, the production manager has many elements and materials to track. To ensure that these items flow efficiently through the pipeline, the production manager's most important duty on a feature film is to find a way to have adequate inventory in each department so that weekly quotas can be met. Through constant communication with his or her management team of APMs/PDMs, coordinators, and/or PAs, the production manager must be aware of the workflow in each department and how it is tracking compared to the plan. The momentum of the production or the necessary inventory in the departments is determined by the schedule. After the main character and location designs are finalized and key assets are built (on a CG project), the first item that the production manager must tackle is making sure that enough storyboard sequences are approved for production in order to start feeding the pipeline. If this is not possible (that is, if script problems are plaguing a project and causing delays), the production manager works with the production accountant to devise new schedules and tabulate the costs of the delay. Or the production manager can determine what

sequences can be shifted around in production and re-prioritized so that the crew can continue to work. Once sequences are approved and there are enough shots issued to meet the required footage per department, the production manager needs to keep a vigilant watch over meeting the weekly targets. When departments encounter problems meeting their quota, the production manager works with that production team and the key supervisors to determine immediate solutions because their shortfall will impact other departments. Possible scenarios to troubleshoot for successful inventory flow include:

- Assess all shots in the department as well as the possibility of putting other shots on the fast track in order to reach the weekly targeted goal. If there is no way to meet the quotas in a given week, the next option is to see whether the department can make up the missed work in the following week, thereby catching up to the targeted number.
- Evaluate departmental workloads to make sure that the expected quotas are realistic and achievable.
- Partner with supervisors to analyze individual artists' performances to make certain all creative staff are producing as expected.
- Reevaluate how artwork is assigned so that the same artists are not always taxed with the most complex work and that all artists are cast according to their strengths.
- Get approval from the producer to ask the staff to work overtime and/or hire freelance artists if quotas are consistently missed and there is no possibility of catching up. Overtime should be used strategically because it is demanding on the artists and can be costly. Unless it is paced properly, it can have diminishing returns.
- Simplify the complexity of shots when the budget is locked and there are no additional funds available for freelance artists or overtime. The director and the producer must approve all shot simplification passes.

Over the course of production, the production manager may have to utilize all of these scenarios at one time or another. However, the best approach is to be proactive and assess each shot's level of complexity during the pre-visualization and turnover phases, making certain that resources are available for their successful completion. (For more information on this topic, see Chapter 9, "Production.")

During post-production, the production manager focuses on tracking retakes and aiding the post-production supervisor in coordinating material transfers. The production manager may be involved in scheduling sessions and, in some cases, attending them based on the producer's requirements. The production manager may also be responsible for upkeep of the script by

tracking and inserting any revisions, along with making sure that all ADR lines are recorded. (For further discussion on ADR, see Chapter 10, "Post-production.")

Production Supervisor

The role of the production supervisor falls somewhere between that of the production manager and the coordinator. This position is most often used in television and direct-to-DVD projects and is responsible for overall project tracking. In features, this role may manage multiple departments, dividing responsibilities between the "front end" and "back end" of the production pipeline or perhaps the "asset production" and "shot production" divisions of the process.

Production Coordinator or Associate Production Manager (APM)/Production Department Manager (PDM)

In general, production coordinators and APMs/PDMs have many job responsibilities in common; however, in television and direct-to-DVD projects, the role is commonly described as coordinator, and on feature productions, it is called an APM or PDM. APMs/PDMs usually work closely with department supervisors, and their jobs tend to be more specialized. In all formats, however, the coordinator and the APM/PDM report to the production manager, and they manage the artists' work in order to meet production deadlines. Depending on the budget and studio structure, they may or may not have production assistants supporting them in their daily tasks. Coordinators are primarily employed during the pre-production phase; APMs/PDMs are hired based on the department start and completion dates.

Coordinators and APMs/PDMs are responsible for tracking artwork, shot status, artist assignments, and artists' output. These are important responsibilities, as the only way to evaluate the status of a project is by being able to assess the detailed progression of each asset or shot down the production line. Because of the necessity for accuracy, conscientious upkeep of the production tracking system by the coordinators or APM/PDM is crucial. Whenever there are any changes on the status of the script or artwork, the information should be updated immediately.

Along with their department supervisors, APMs/PDMs are responsible for the allocation of man-hours within their department and, in anticipation of such a task, they provide bids (a rating of the expected level of difficulty) for shots at the time of a

sequence turnover. These bids are given to the production manager and/or entered directly into the production tracking system. Other vital data that the APMs/PDMs enter in the system should include the name of the artist currently assigned to the work, the date the work started, the expected due date, and the date when their work is approved. The APM/PDM also reports on quota evaluations and will re-project their department's progress on a weekly basis in concert with the production manager.

The coordinator or APM/PDM must focus on developing good working relationships with the artists. Being straightforward about deadlines and the overall production schedule is essential in order for artists to be given a chance to complete their assignments on time. If artists don't consider the allotted time to be sufficient, the coordinator or APM/PDM should work with them in order to find a more suitable schedule. If past experience shows that an artist is consistently late the coordinator or APM/PDM may find it necessary to follow up with the artist on a more frequent basis. In response to having to adhere to the stricter due dates, the artist may feel that he or she is being put under too much pressure to produce. Under these circumstances, it is important to involve the department supervisor so that the problem can be resolved promptly. When "due dates" are not met, production goals will inevitably be missed. When this is the case, it is vital to alert the production manager as soon as possible.

In an animation studio, the coordinator or APM/PDM must monitor and maintain certain items in order for their department to run smoothly. The most important prerequisite is making sure that artists have the material they need in order to work on their assignments. Whether it's complete shot notes, a piece of art from another artist, reference material, or access to a certain software package, it all must be prepared prior to the handout session. Equally as important is making sure that the necessary equipment is in working order. If not, a report must be made immediately so that a hardware or software failure does not result in production delays. Also, creating an artist-friendly environment is an absolute necessity for any production. It is not uncommon to have situations in which one artist is unhappy with a neighboring artist's loud music, for example. Again, it is up to the coordinator or the PDM to resolve the problem or seek help from the department supervisor and/or production manager.

As an artist completes his or her assignment, it is the APM's/PDM's responsibility to ensure that the department supervisor and/or director promptly review the work for approval or revisions. Once the artwork is completed and the director has signed off on it, the coordinators and APMs/PDMs organize, file, and distribute the material as necessary. The coordinator prepares

the material for shipment (if applicable), or the APM/PDM communicates the approval of the artwork and its availability for the next department.

When the work is subcontracted, the coordinator has to make certain that the final artwork is ready on the agreed-upon shipment dates. The coordinator acts jointly with the production manager on the preparation of the material. He or she functions as the contact person for the subcontracting studio and must facilitate all their production needs as quickly as possible. On in-house projects, it is up to the APM/PDM to check that when a shot leaves the department it contains all the necessary notes and artist reference information, ensuring that it is fully prepared for the following department and updated correctly in the tracking system.

The coordinator or APM/PDM must also keep everyone apprised of the crew's status. Maintaining a master calendar that shows information on artists who are on vacation, on leave of absence, or have taken ill is very helpful. Generating a contact list for the crew and a confidential list of home phone numbers in case of an emergency is also useful. Finally, because they see artists on a daily basis and are aware of the number of hours worked, coordinators and APMs/PDMs are responsible for reviewing their timecards before they go to the production manager for signature.

As the production begins to wrap up, coordinators and APMs/PDMs are involved in closing down the department as necessary. They are responsible for disk space management, or at the very least, overseeing the offlining and archiving of their department's work files. They are also responsible for archiving physical artwork, if applicable. In both the digital and physical archiving efforts, the coordinator or APM/PDM creates an inventory list of all archived items for future reference.

Script Coordinator

The script coordinator works with writer, the story team, the editorial team, and producers to keep the script up to date. The script coordinator assists in tracking the status of the writing and takes care of any production needs that have to do with the script. As scripts go through various drafts, this coordinator ensures that everyone involved in the writing and approval processes (executives and producers, for example) have the most recent version. If there are page changes rather than entire new drafts, they distribute the specific pages. If hardcopies are distributed, updates are often printed on colored paper, with the various colors indicating the specific revision. Each new page

should include the date and draft number, with the new writing being indicated with an asterisk. Once a script has been finalized and greenlit to move into production, script coordinators distribute the script to in-house staff as well as the casting director and voice director, if applicable, who are responsible for getting all materials to the actors and the recording engineer. The script coordinator should help ensure that script distribution is carefully monitored and tracked for confidentiality purposes; a watermark is often ghosted behind printed versions of the script to discourage unauthorized copying.

When changes are made during production and/or the recording session(s), the script coordinator updates the script and distributes all revisions to the appropriate individuals. The script coordinator must also work closely with the editorial team to make sure the script reflects the most current editorial cut of a project. It is the script coordinator's responsibility to keep a record of all versions of the script for reference and archival purposes so that executives and/or producers can refer to materials at any time. They are also responsible for preparing materials for casting sessions and reformatting the script for recording sessions. They collaborate closely with the casting director and may be asked to attend recording sessions to help the producer(s) and recording engineer by keeping track of preferred or "circle" takes and other pertinent information. (For further information on this topic, see Chapter 8, "Pre-production.") When a project is completed all the way through production and is delivered, script coordinators are then responsible for preparing the as-aired script (in the case of television) or the as-delivered script (for direct-to-DVD and feature projects). On shows that do not have a script coordinator, the production manager is usually responsible for these duties.

Production Assistant (PA)

The job of the PA is to support the coordinator or APM/PDM and the artists. When a production creates either physical or digital artwork, the PA's duties include labeling and pasting-up artwork and copying and filing either hard copies or digital copies. They are also responsible for aiding the coordinator or APM/PDM in tracking the status of the artwork and assets. Diligent and conscientious handling of artwork is a requirement for the production assistant in order to prevent costly losses to the production. Once the project is close to completion, PAs assist other members of the production team in archiving the material.

Aside from focusing on the artwork, the production assistant takes on any other tasks that may need administrative support. Should the artists require reference materials such

as books, DVDs, or images from another shot for reference or reuse within their own work, it is the PA's responsibility to find them. When new artwork is created or a design is revised, the PA ensures that all of his or her department's artists are up to date and can access the material. The PA may take notes during handoff or review sessions and update the production tracking system accordingly. They also make sure that art supplies are available and reordered as necessary. They are often asked to bring in food for departmental meetings or for crewmembers working overtime.

While some of the tasks may seem small in scope, the production assistant has the opportunity of working on many facets of production, providing him or her with a unique learning experience which is excellent training for a future producer.

Production Secretary

The production secretary is integral to the smooth operation of a production. Much of his or her job is focused on seemingly mundane office work, including typing, copying, filing, distributing memos, scheduling meetings, and taking messages. However, if these tasks are not handled well, these missteps can quickly lead to communication breakdown among the production staff. The production secretary essentially works for the team as a whole. He or she may be assigned as an assistant to the producer and/or the director, responsible for coordinating daily schedules and setting up meetings for these busy roles. The producer relies heavily on his or her assistant to take care of many details, including all dealings with voice talent and ancillary groups, for example. Given their workload, in most cases, producers require a dedicated secretary.

The production secretary should be able to multitask. On productions that require crewmembers to fly to other animation facilities, production secretaries make travel arrangements and assist the staff in completing their expense reports. Depending on the studio structure, they may also be in charge of ordering production supplies and making sure that all necessary material for production is in stock and readily available. The production secretary may also coordinate shipping needs as necessary—a vital role when a subcontractor is part of the production process.

Figure 7-2 is an organizational chart applicable to television production.

Subcontractors

Using subcontractors is a very common practice within the animation industry. Subcontracting occurs in all formats of the

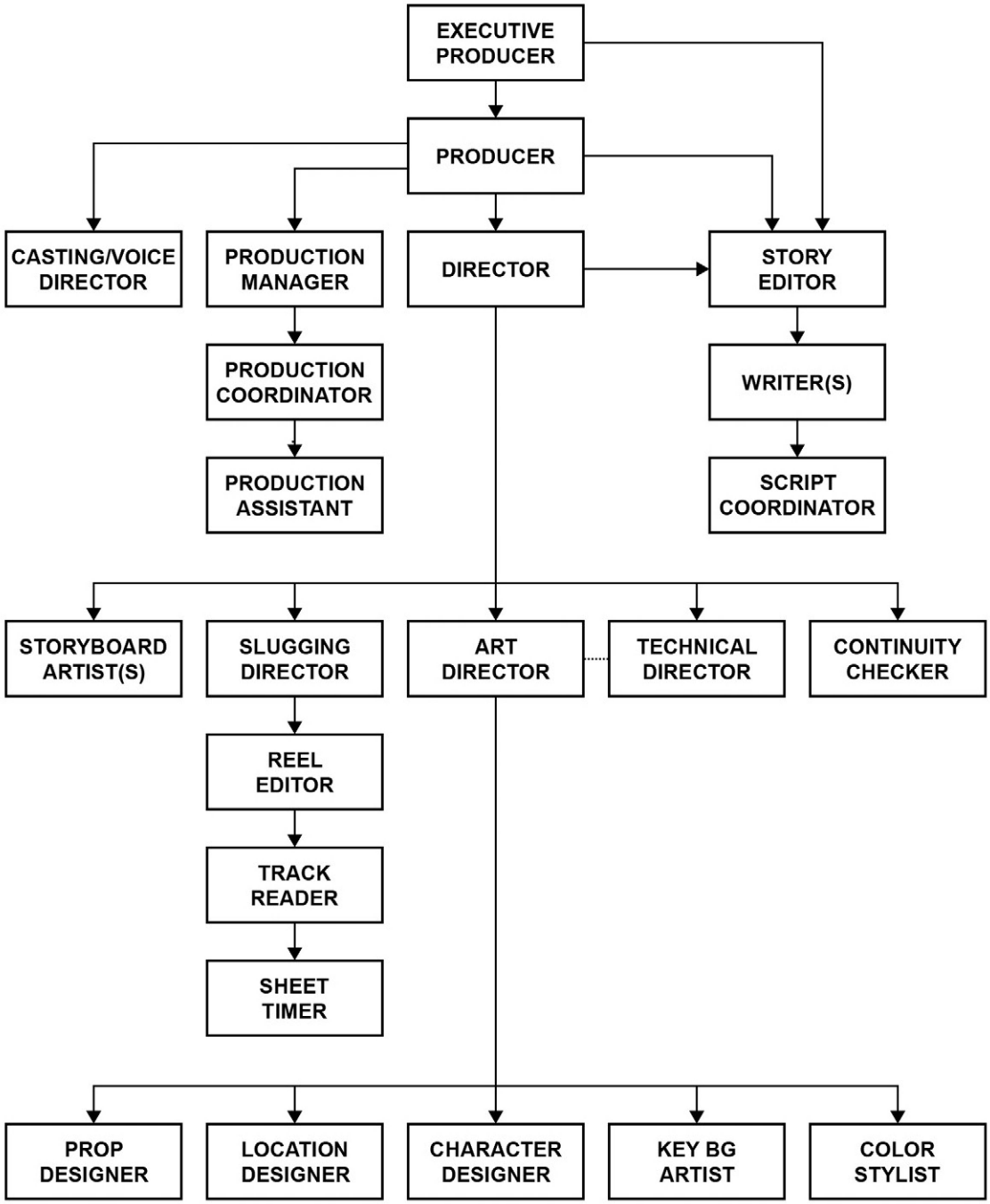


Figure 7-2 Sample crew organizational chart for television production.

business. On higher-end projects such as a feature, although the goal of most studios is to produce everything in-house, there are cases where specific components such as animation are outsourced. The majority of subcontracting takes place on television and direct-to-DVD projects where typically the entire production portion is shipped to an outside studio. (See Chapter 9, "Production," for detailed information on the steps of production. Note that the subcontractor may not follow the production steps exactly as outlined in this chapter, but may instead use a variation depending on the budget and their methodology.)

Producers use subcontractors for many reasons, the primary reason being that subcontractors tend to be cheaper, which is often because wages are lower at international studios. From a budgeting standpoint, it is also less expensive for the producer to hire an outside group rather than carry all of the overhead costs associated with a full production crew. A lack of available talent is another reason for subcontracting a show. It could be that there is a specific crew best suited to the project at an outside studio. Finally, subcontractors can help with meeting a schedule. If a project is behind, a subcontractor may be able to assist in getting the show back on track by temporarily providing the needed resources the production requires.

Identifying and Selecting a Subcontractor

Identifying and selecting a subcontractor can be difficult the first time around. Once you have worked with a number of studios, it becomes easier to choose one as you build a list of contacts you can depend on. A good way of finding subcontractors is by speaking with colleagues at other studios. Ask for recommendations. Find out whom they have worked with and what went well and what didn't. If you do not have contacts, one way of finding a studio is to watch the credits of shows you are impressed with or that stylistically match your project. Identify the name of the studio and review their reel on their website. Production houses that do subcontracting work are located all over the world—in Asia, Australia, Europe as well as North America. In some cases, larger subcontracting studios have offices and/or representatives set up in the United States. At the very least, they probably have a dedicated studio website that profiles their work experience.

When choosing a subcontractor, the producer must put his or her casting skills to test. As noted earlier, one way of selecting a studio is to review their online sample reels. In some cases, you may be asked to a private screening because the work they have done is proprietary and/or yet to be aired/released. Although it may not always be clear what type of pre-production materials

the studio had to work with, demo reels can still be a good indication of a studio's capabilities, as they show only their best work. If you find yourself interested in a couple of studios that have offered bids in the same range, you may want to "audition" the studios to help you make a final decision. It is not uncommon to ask a studio to animate a shot or two, especially if you have never worked with them and may be hiring them for an extensive project. By doing so, you can compare quality, working styles, and communication techniques and then make an educated choice. The only problem with testing is that typically the subcontractor puts their top talent on the test in order to secure the work, and this talent may not be a true representation of the studio's capabilities. One tactic that has good results is to set up a creative partnership with the subcontracting studio, which can be achieved by involving the subcontract team's key artists in reviewing the pre-production materials for potential complexity or identifying production problems prior to finalizing them. Another method is for the studio to actually participate in the creation of the pre-production artwork. By doing so, they also have a vested interest in the product, as they have had the opportunity to put their mark on it.

When selecting a studio, be very certain that it has the capacity to handle your work from both a quantitative and a qualitative standpoint. You need to take into account your timeline and the quality level expected. It is not unusual for studio owners to get overly ambitious and overbook themselves. When this happens, your subcontractor may end up subcontracting your work to another subcontractor, who in turn hands it off to another subcontractor. Each time your project is passed on, money is scraped off the initial budget and generally is no longer put towards the quality of your show.

If your project is in CG, pipelines are often so different that subcontracting can be difficult. It is vital to make sure that the subcontractor's software systems and file formats are compatible with the rest of your production pipeline, especially if the plan is to share assets between studios. If not, there will be inevitable hiccups and challenges that can significantly affect the schedule.

In certain cases, you may be told up front that the subcontractor may not have the capacity or the capability to handle every stage of production in-house. In order to provide full services, they need to outsource the work to other studios with which they have relationships. Under these circumstances, the subcontractor should clarify from the beginning what stages of production will be sent out and which studio(s) will be completing the job. It is important for the producer, director, and CG supervisor to visit all facilities working on the show to confirm that they have the background, compatible pipeline, and experience to handle the

The Joys and Perils of Togetherness

Igor Khait, Co-Producer, *Gnomeo & Juliet*

Arguably, one of the better ways to make an animated movie at a contracted studio is to embed a leadership team at the facility. It does, however, remind you of the times when your mother would take you to play with a kid you'd never met before because she wanted to have tea with his mom. Maybe that's just me, though, but there's something to that analogy. The crews did not ask to work together and did not seek out a new "learning experience." The producers and the contractor decided to strike a deal to make a movie and everyone else has to fall in line and "make it work."

The relationship between the creative leadership brought in by the client and the existing studio talent is an interesting mixture of emotions. There's excitement over a new project and the as-yet-undiscovered potential of something novel, but it's sown generously with apprehension, skepticism, doubt, and resentment on both ends:

"These new people are never going to understand how we've always done it here. Just give us the work, leave us alone and we'll get it done." "Can these guys at the studio even do the work? We're going to have to hold them by the hand each step of the way."

I worked on an animated feature project under similar conditions and the experience turned out to be a worthwhile collaboration between cultures and methodologies. When we began, I heard similar cynical comments. Incidentally, this attitude wasn't limited to artistic leadership. Plenty of production people expressed the same sentiment over working with their counterparts. Of course, this reaction was understandable because everyone was nervous! Not only was it the usual obstacle of people being thrown together and told to cooperate and to make something beautiful while they're at it, but we were bringing authority from the outside, melding crews, and asking the facility to push everything to their capacities for quality and complexity.

Our challenge became figuring out how to integrate the know-how of a functioning, talented studio with existing efficiencies built on in-house ingenuity with newly introduced creative supervisors. The new leads had a passion for their film and a particular way in which they expected the work to get done. They were under pressure to deliver the director's vision while being constrained by the limits of a medium-sized budget.

It wasn't easy and it wasn't always pretty. There was no single solution that applied to all departments. We had to take a hard look at the personalities involved and create custom arrangements. In some areas, the in-house department supervisors functioned better when cooperating closely with the client leadership. In others, empowering the in-house leadership and having the client take an active role primarily during approvals worked much better. It truly came down to assessing interpersonal dynamics and being willing to shift and change if the relationships were not working. I found it important to remember that it doesn't matter how you did things at the big studios or any place else. It didn't matter how you think things "should" go. What mattered was getting a clear picture of who the individuals were and how they could work together best in the current situation. Workflow is easy to adjust, but personalities are not, so make the most of what you have and learn to play by ear.

For instance, there was a particular department that had an established pattern of working with their creative lead and with putting the work through in a way that both benefited from and enhanced the studio's efficiencies. When we attempted to integrate a visiting supervisor deeply into the heart of the department, we lost some of what had made the department so special to begin with. Once we let the department function mostly the way they had in the past, with some new procedures demanded by the nature of the project, we fell into a rhythm that ultimately led to some amazing artwork. Rethinking and flipping things around when they go awry is not a sign of defeat, but rather a tactical adjustment necessary in the field.

We learned to trust the talented artists do their jobs, and they learned to accept that an "outsider" may have the insight and a new perspective to make the work stronger. After all, what everyone is trying to do is just to make a good movie.

work. Additionally, this information must be covered in the contract, ensuring that the original subcontracting company hired is solely responsible for the production and on-time delivery of the show. Depending on the project, its specific needs, and the subcontracting studio's setup, there may be a myriad of different production structures.

In television production in which the deadlines are very tight, it may be necessary to split the project among two or three studios. This scenario is possible so long as the production pipelines are compatible. Episodes are sent to a variety of different studios so that the studio running the project is covered in case one of the studio cannot meet their deadlines. There are positive and negative potential outcomes from making this decision. The positive is that schedule delays should not be an issue because the subcontractor's capacity theoretically will not be overextended. Also, if there is the opportunity for future work, a team that has been hired to animate only a segment of the project this time may work extra hard to impress the producer in hopes of getting all of their next show. The negative is that there may be inconsistencies between studios in terms of production quality. In this case, it is the responsibility of the producer to be sure that materials and as much information as possible is shared between the groups. It is ideal for the director, CG supervisor, and/or overseas supervisor to visit all studios on a regular basis to check their progress and provide input. Or even better, the key people from each team can visit each other and share information in person.

Finally, an important issue to consider is cultural sensitivities toward certain materials when choosing a studio. In most cases it is not an issue, especially when it comes to children's programming. It may be a problem if, for example, you find yourself working on a more adult-oriented project, especially if you are working with a studio that exists within a culture that is less open about nudity or foul language, for example. Cultural interpretations of comedic timing and dramatic acting may also vary widely, making it quite a challenge to ensure the subtleties of performance is clearly understood and created for your project.

Negotiating the Deal

After you select your subcontractor, the next step is to negotiate a deal. Working with the business affairs office, the studio's production executive or the producer negotiates a deal. At larger studios, the production executive is usually responsible for handling overseas deals. By handling the contractual agreements for the studio as a whole, these executives can get better deals by negotiating in bulk. In independent studios that have less infrastructure and a fewer number of projects, the producer usually

handles the actual negotiations but keeps business affairs or legal in the loop, as they will be responsible for preparing contracts and dealing with any litigation issues should they arise.

When negotiating, the producer needs to establish the following areas:

1. **The subcontractor's scope of responsibilities.** This area includes the exact elements they will be responsible for producing as well as their delivery format.
2. **The producer's scope of responsibilities.** This area includes the artwork and various materials that the producer and domestic studio are expected to provide. (Such items will be discussed later in this chapter.)
3. **Schedule.** The schedule should outline review milestones as well as the projected shipments (date and amount of footage/shots) from the producer to the subcontractor as well as projected delivery dates from the subcontractor to the producer. Both domestic and overseas holidays should be accounted for in the schedule.
4. **Fees.** Producers generally negotiate deals on a per-footage/complexity basis based on the work being outsourced.
5. **Fees for changes/fees for creative retakes.** For more information, see the section "Receiving Material from the Subcontractor" later in this chapter.
6. **Exchange rate.** Because exchange rates can fluctuate over the course of a production, it is helpful to define a rate or range the currency can increase or drop to.
7. **Payment schedule.** There are many ways to structure this schedule, such as 50 percent upon commencement, 25 percent on completion of animation, and 25 percent upon final delivery. Or this schedule may be based upon delivery of footage amounts instead of phases of completion.
8. **Bonuses.** Negotiating bonuses for on-time delivery is always a good way to help ensure that delivery dates are met.
9. **Qualitative expectations.** Referencing a project of similar production value is one way of establishing that production quality standards are understood up front. It is important to be clear as to what your expectations are so that when retakes are recalled, they are seen as necessary by both sides of the deal.
10. **Talent.** It is helpful to put in writing the level of talent agreed to, along with any key artists to be assigned to the project.
11. **Technology.** Systems must be compatible. If there are any hardware or software purchases required for the project, it is necessary to specify how the costs will be covered. It is

also important to discuss costs involved with research and development, if applicable.

12. **Technical expectations.** Detail specifications for all aspects of the project that need to be delivered to the producer and establish file formats, naming conventions, and so on.
13. **Communication and decision making.** Set up point people at each studio for communication and be clear about who has decision-making authority.
14. **Approval stages.** Establish at what stage elements will be reviewed by the producer and/or director/and or executives for comments before they are considered final. Also to be included is the format on which the project will be delivered.
15. **Production reports and tracking system.** Establish when and to whom production reports should be sent. Better yet, create a shared web-based tracking system to keep this information readily available and current.
16. **Terminology.** Ensure that all parties have the same understanding of the terminology used for the various job categories. For example, certain titles may not have the same meaning for the domestic studio as it does for the subcontracting studio. (For more information, see Chapter 9, "Production.")
17. **Travel.** Establish who will be responsible for the cost of the subcontractor's travel, if applicable.
18. **Shipment of materials.** Set up standard expectations as to how material is delivered digitally and/or physically from the domestic studio and vice versa: via FTP sites or email attachments, or through the shipment of actual hard drives and/or physical drawings on paper.
19. **Title sequence.** If the title sequence is being handled by the subcontractor, outline fees and any other applicable information.
20. **CG elements.** When there are CG assets to be produced by the subcontractor (for example, 3D models or digital effects such as rain), the number and/or detailed description of specific elements should be included.
21. **Credit.** Clarify how credits will be handled and placed. On television projects on which the credit time and space is limited, it is customary to credit the studio and key artists or department heads. On direct-to-DVD and feature projects, typically all members of the crew are accorded credit.
22. **Performance criteria.** When setting up a deal with a subcontractor, it is important for a producer to include an option to withdraw the contract, should the subcontractor not perform up to par.

Overseas Supervisors

The overseas supervisor functions as the liaison between the domestic studio (that is, the director) and the subcontracting studio. Often working through interpreters, the overseas supervisor's job is to ensure that the project is being produced at the level expected by the contracting studio. If the overseas supervisor determines that there are problems with the project or potential schedule delays, it is his or her job to inform the producer and director as soon as possible.

Not every project can afford an overseas supervisor. Some productions may hire this person just to get a project launched and its the production quality and workflow established. It is customary for the producer to pay for housing, business class transportation, a competitive salary, and per-diem fee. As such, it is important to hire a competent person to handle the wide varieties of responsibilities entailed in this role. Before you make the decision to hire a supervisor, assess whether it is a necessity for your production. In many cases, the personnel and talent at subcontracting studios are very qualified and accustomed to working directly with the domestic studios. Unless it is a first-time studio or a very special project, it may not be worth spending the money; it is also very hard to find good supervisors with all of the necessary credentials. If you do feel that it is in the best interest of the project to have a representative on site, there are certain qualifications that are necessary for the role.

First and foremost, it is crucial to hire a supervisor who has strong interpersonal skills. This supervisor must be a team player and, most important, culturally aware. It is this person's job to inspire the producing team. He or she should therefore be flexible and sensitive in handling the many individuals and issues that will be encountered. It is necessary to keep in mind that subcontracting studios typically dislike having a supervisor in-house. Therefore, the person hired must be able to effectively ingratiate himself/herself with the staff. The supervisor must have an extensive technical background in animation production. Because he or she will be working with experienced directors and department heads, it is essential for the overseas supervisor to have a working knowledge of all aspects of production. If the supervisor is weak in the fundamentals of animation, it will quickly become apparent and the subcontracting team will not have the level of respect necessary for the supervisor to be effective. The producer and director will also not be well served because the supervisor may not catch all of the mistakes and fix them.

On higher-budget projects, there may be several supervisors sent to the subcontracting studio to review artwork (for example,

a technical director or an animation supervisor). In most cases, however, there is only one supervisor. The supervisor's job is to review shots on a daily basis from all departments, knowing which areas of the show require extra attention and potentially have to be prioritized for promotional purposes, for example. When the right person is cast for this role, he or she can be a tremendous asset for both the domestic and the subcontracting studios.

Overseas supervisors must also be good communicators. They must answer a variety of questions on topics ranging from creative and technical to cultural issues. For example, a supervisor can bring to life the comedy in the project by explaining why it is considered funny and performing the parts for the crew. Given that comedy is very much culturally based, the supervisor on such projects plays an intrinsic role in ensuring that it is understood by all. The supervisor is responsible for staying in constant communication with the project's director, especially when it comes to making creative judgment calls. Serving as the director's remote set of eyes and ears, the supervisor needs to discuss all creative decisions with the director, especially if the supervisor is not clear on how the director would handle a question. It is vital that the overseas supervisor remembers this about his or her role, and does not independently make creative decisions that lead the subcontracting studio away from the director's vision. In cases in which this has happened and the work is finally seen by the director, retakes have been called, completely opposing the supervisor's instructions. Such retakes send a mixed and confusing message to the show's crew and ultimately undermine the role of the supervisor. Given that the director's representative made this decision, the subcontracting studio has the right to charge for the retake.

Material Packages/Shipments

The key to working with a subcontractor is clear, concise communication and information on the part of the producer and director. With the exception of a few studios, if the material provided is not solid, you will get equally weak if not weaker material back. Likewise, if a pre-production package sent out for animation is organized, well thought out, and contains all necessary elements, chances are good that the quality of the footage produced will reflect this original package. It is therefore necessary to have a continuity checker go through all the elements to ensure that everything is consistent, hooks up, and is easily understood. Although the director approves all items being shipped, it helps to have a checker review all the material to catch any possible problems that could hinder production.

More often than not, the producer and director may miss important elements because they are already so familiar with the show. Ideally, setting up a shared online tracking system and production reel allows the director and or department leads to supervise how the shots are coming together and—if adjustments are necessary—to catch fixes as early as possible.

Depending on the material to be produced by the subcontractor, a producer should provide some or all of the following elements:

- Script
- Storyboard/story reel/previsualized reel (depending on methodology)
- Visual style guide and/or model packages
- Layout keys (black and white) or pre-visualization shots
- Background keys (color paintings)
- Audio tracks
- Reference materials (photos, books, DVDs)
- Videos/digital movies of the director acting out key scenes or sequences that might be particularly challenging
- Route sheets (a summary of each shot, its length, applicable camera movements, effects shots, and color/texture treatment information along with names of staff members overseeing the work)

Although the majority of productions rely on sending preproduction elements digitally, if the show is still shipping content, it is important to factor in time for clearing customs and any time zone differences. It is always possible that the package will not be received on the same day that it is due in the country. Keep in mind that in post-production, one day or even several hours can be critical. It is therefore necessary to build in some additional time into the schedule to account for unpredictable shipping delays.

Handing Out the Project

At the beginning of a new production, the project's director, producer, visual effects supervisor and/or CG supervisor (if applicable), and any key artistic personnel should visit the subcontracting studio to hold a handout meeting and set up the overseas supervisor if one is on the project. A handout meeting is an opportunity for all of the subcontractor's key personnel, including directors and department heads, to ask questions. Depending on the scope of the production, this meeting can take as little as one day or as much as a week. If the director is not able to travel, he or she can provide this instruction via video conference.

On series production, if there is a supervisor hired, he or she would be responsible for holding handout sessions each time a new episode is received. If not, this is typically handled

through handout sessions over a videoconferencing system. The most creatively conducive way of handing out a project or getting the production team prepared is to have lead artists visit the domestic studio. This visit allows them to spend time with the crew and familiarize themselves with the project prior to it shipping. These in-person visits are key to facilitating clear communications, especially when trying to ensure that everyone is on the same page regarding art direction and production quality expectations.

Monitoring the Progress of Production

Once the production gets started, it is essential that the producer or their production manager closely monitor its progress by establishing a system of weekly reports on a per-asset, per-episode, or footage/shot quota basis. (See Chapter 11, "Tracking Production," for a sample report.) These reports help the producer determine the status of the project. Weekly or biweekly phone or videoconference calls are also important. It can be challenging sometimes if the communication is handled through translators, as some information can get confused or lost along the way. Although email communication is helpful, a studio visit during production is very beneficial, as much more information is gained from an in-person visit. Creative or technical questions that may have been difficult to articulate over the phone or in writing can get resolved much more quickly in person.

The Wheels of the Train

Ivan Shih, President/Executive Producer, CGCG Inc.

If the producer of a project is the "engine" of a train, then the subcontracting studio that he or she partners with is the "wheels" that keep it running. In order for the train to reach its final destination successfully, the wheels need to follow well-laid tracks for a smooth journey. When laying the tracks, there are many things for the producer to consider; from our experience as the wheels on the train for many projects over the years, here are the most important factors to keep in mind when embarking upon a producing partnership.

At the top of the list, the client should provide a complete and comprehensive production design package that sets up the foundation for the project. It needs to be as detailed as possible to help eliminate the gap between the client producer's/director's expectations and what can be realistically delivered by the subcontracting studio in the time scheduled.

Good communication between the client and the subcontracting studio is vital, all the way from the beginning to the end of the production process. It's not just about arranging personal visits or video and phone conferences. Although these are critical, even more important is keeping an open mind and being able to discuss and resolve issues in a peaceful manner. This mindset helps ensure that our two sides feel like we are truly on the same team.

Also important is an up-front consensus on the production budget and the production schedule that the subcontracting studio has been given. By working under a sufficient production schedule and being provided adequate resources, the subcontracting studio will then be in a position to allocate its optimal resources (including manpower and hardware) into a workable pipeline, which ultimately will lead to a smooth journey and the on-time, satisfactory delivery of end results for the client.

On one project, we had what almost turned into a bit of a "runaway train" situation. We were working with a relatively new studio that was producing a very demanding property. The expectations were high and our team was very excited at all of the creative possibilities it would bring into our studio. The challenge, however, was that although we thought we had a consensus before embarking on production, the schedule and expectations were a moving target, as our client tried to sort out its workflow, story, and creative plan. These ongoing changes made planning and team building difficult for us. We had to ensure that there was a team ready and in place to start. This meant saying no to other work. The issue we faced, however, was that the schedule from our client kept changing. Not knowing exactly when we could start production, we held on to our team and lost precious resources in the process. When we did get production ramped up, the story continued to get revised with a significant increase in complexity. What became clear to us was that we would actually need to double our crew size in order to meet the creative expectations of the client.

Another challenge we faced was that the initial pre-production packages we received were incomplete. They missed many of the details we required to ensure the assets were delivered at the level of quality expected. This resulted in many notes for changes on our part, all above the scope of what was originally agreed to.

Communication was another area that we were struggling with. We had been trying to work through phone and videoconferencing. Due to many factors—including the ongoing changes as well as basic language barriers—it was hard for everyone to understand each other and what it was they were dealing with. We wanted to make our client happy, but we were feeling more and more deflated as the expectations and notes on our artwork were increasing yet the time and resources were not. There seemed to be no satisfactory solution in sight, and tension was beginning to grow on both sides of the project.

At this point, our client producer fortunately recognized the project was starting to go off the rails. Playing the critical role of an arbitrator between the directors/supervisors and our studio, this producer helped our partnership get back on track by setting up face-to-face meetings with all of the key creative, production, and technical staff on both sides. We ended up spending many days locked together in a conference room, and together we brainstormed collaboratively as opposed to pointing fingers and being frustrated with each other. Out of this marathon week came many ideas that helped us overcome our production and communication obstacles. We managed to find consensus with regards to the level of quality expectations, and we established a new plan for our client and allotted time to make sure everyone was satisfied with the final product and the process to get there. Most important, however, we came out of this experience with a newfound sense of empathy and respect for what each group was trying to achieve, realizing that ultimately we all just wanted to do the best job we could.

As the project continued, we had regular in-person team meetings at both studios. Our director even spent several months directing a few episodes at the client's studio. This experience provided him with incredible insights into their process and challenges. The final results were something everyone involved was very proud of.

There are always some bumps on each journey, yet we as the "wheels" always do our best to make the ride as smooth as possible by turning these challenges into valuable learning experiences. We learn from past mistakes, but we never dwell on them. We feel proud when a project is successfully delivered on time and when the client is happy with the quality. We feel even more proud, however, when our work has been shared with the rest of the world, knowing that there are smiles on people's faces and their hearts and souls have been touched by our work.

Receiving Material from the Subcontractor

Once footage is returned, it is the job of the producer and the director to review it for retakes. There are two types of retakes: technical and creative. A technical retake is, for example, a reshooting of a camera move that didn't follow the detailed instructions of the director. The subcontractor is responsible for this type of retake and must fix the shot at no charge to the producer. A creative retake is a change that the producer or the director request that is not consistent with the materials previously sent and completed by the subcontractor. The contracting studio may have asked for the character to walk, but upon viewing the animation decide that they would prefer to see the character jump, and therefore new animation is required. In this case, the subcontractor will bill the producer for the changes according to a predetermined rate for overages. After the material has been viewed, a retake list is sent to the subcontractor. The list must be accurate and succinct, especially when it may require translation. Whenever possible, it is useful to include illustrations with the retake notes. You want to be sure that nothing is confusing, creating the best scenario for getting a perfect shot back. A shot may go through several retakes until it is approved. It is customary to include information on whether the retake is considered to be creative or technical. By taking this last step, you can avoid many headaches when the subcontractor sends you the final bill.

During the retake process, the producer needs to make sure that revisions are methodically tracked. Sometimes there may be as little as 10 percent fix on a project, or it may be as high as 100 percent. On most television series, there will also be several episodes going through this stage at the same time. It is therefore very challenging to keep everything organized to ensure that each and every final shot placed in the show is approved. To that end, the production manager (along with the editor) usually tracks retakes. (See Chapter 11, "Tracking Production," for a sample retake chart.)

Expect the Unexpected

Materials can get lost, supervisors may quit, studios can burn down, and foreign governments may be overthrown—there are countless ways that your project may be affected by incidents beyond your control. It is best to be fully aware of your options and backup plans at all times. Be prepared for fast and sudden changes, armed with the knowledge that you have selected a capable production team that can anticipate, analyze, strategize, and dig their way out of any difficult situation by your side.

8

PRE-PRODUCTION

The Role of the Producer During the Pre-production Phase

As a producer, if you have reached this phase in the process, you should be patting yourself on the back. It is a huge achievement to get a project greenlit, meaning that all the funds are in place and you have the go-ahead from the buyer to produce the show. You have made it through some of the toughest hurdles and now the fun begins with pre-production.

Pre-production is the phase in which the elements that lay down the foundation for the production are assembled. This configuration can differ greatly from project to project due to wide variation in pipelines and software capabilities. Whether a production goes smoothly depends on how the producer procures the key ingredients at this juncture. (See Figure 2-1 for reference.) The following is a list of the items necessary in order to begin pre-production:

- A production-ready script
- The series bible (and at least three final scripts for a series)
- Conceptual artwork
- A list of assumptions (See Chapter 6, "The Production Plan," for a list of assumptions.)
- An approved budget and schedule (See Chapter 6, "The Production Plan," for more information on budgeting and scheduling.)
- The crew plan (See Chapter 6, "The Production Plan," for more information on crew plans.)
- Asset management and tracking system (See Chapter 11, "Tracking Production," for more information on tracking systems.)

As the development phase wraps up, the production manager (under the producer's guidance) devises a master schedule using the production-ready script and the conceptual artwork. By breaking down all the tasks that need to be accomplished into detailed department "micro schedules," the management team in collaboration with the department supervisors begin to set up

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assignments and due dates, thereby officially starting the pre-production phase. Areas of work scheduled in this manner on episodic television, for example, include designs, storyboards, casting, recording sessions, song sessions (if applicable), and color keys. These schedules aid in tracking, planning quotas, and projecting the length of time needed to produce each element. (See Chapter 11, "Tracking Production," for more information on scheduling.)

At this point, the producer's main task is to recruit a crew and build a team, staggering the start dates to match the timing and needs of the various production goals to be accomplished. As the project is geared up for new employees, the producer begins to delegate duties to his or her administrative staff. For producers who have limited resources for a support staff, prioritizing their daily goals in accordance with the production's needs is essential.

First impressions count. It is important for the management team to work like a well-oiled machine as they welcome the new crew members. On a most basic level, it is necessary to make sure that the needs of every new employee are met. The producer or an administrative staff person should work with operations or the office manager to guarantee that space, equipment, and supplies are ready for each crewmember on his or her start date. It is also essential to establish a system to inform the current staff about who is starting when. Items to consider when preparing for the arrival of a new employee include an informal meet-and-greet with the producer and director. This meeting serves as an opportunity to welcome the new employee and tell him or her the status and goals of the project. When orienting more senior crewmembers, it is important to discuss immediate production agendas in order to quickly integrate such key players into the framework of the project.

Other details to organize for new employees include startup paperwork, assignment handouts, a studio tour, instructions on telephone use, a parking pass, and studio identification badge (if applicable). These small details make a big difference to the individual joining the team. Although this information seems obvious, it is all too often overlooked. Utilizing the production tracking system, the management team should also be sure all the applicable material, such as the latest script and artwork, are digitally available to the crewmembers. It is critical that right from the start, the artists know that they can access and prioritize their assignments via the production tracking system. (See Chapter 11, "Tracking Production," for more details.)

Before the production gets too far underway, the producer and director hold a kickoff meeting. The purpose of this meeting is to communicate the creative and administrative goals of the production. This gathering is a great opportunity to harness everyone's enthusiasm and get the project started on the right foot, with the proper timing and deadlines in mind. The

producer and director let everyone know what their expectations are and how they intend to reach their goals. The crew also gets the chance to ask questions. Depending on the number and timing of crew roll-ons, multiple kickoff meetings may be required. General crew meetings should be ongoing throughout pre-production to keep everyone informed and on board with the project. Keeping the team enthusiastic is key, especially when the workload increases as revisions come in. If artists are working remotely, video conferencing is a necessity for enabling the staff to stay in the loop. Some projects may consider videotaping production meetings and posting an edited version online, thereby allowing all members to be up to date with the project's latest news and immediate and long-terms goals.

Besides making sure that all crewmembers are properly oriented and off to a good start, it is also the producer's role during pre-production to facilitate the buyer's input on the various elements produced before these assets get too far into the process and become cost-prohibitive to change. Creative checkpoints, or reviews and approvals (as established in Chapter 6, "The Production Plan"), must therefore already be established in order to allow for this feedback. The buyer commonly has input on all key elements, including voice casting, the voice track, all main character and location designs, the story reels/animatic (essentially the rough cut of the film), assets and pre-vis reel. (See descriptions for all items noted later in this chapter.) The storyboard may be viewed as either rough or cleaned-up artwork, depending on the experience of the buyer, or storyboards may be skipped as a review step altogether in exchange for a pre-vis review. If the buyer requests significant changes, he or she may need to have a second review of the materials once revisions are addressed. If the buyer is satisfied with the work, the producer need only communicate that the changes are being handled. When revisions are not being dealt with according to the buyer's requests, the producer's relationship with the buyer can quickly get off track as the trust between the two groups erodes, which is why establishing a clear loop-back or follow-up strategy is very important to the success of a project.

During pre-production, it is also important that a producer start creating a link between the project and various ancillary groups. Unless these departments (publicity, advertising, promotions, consumer products, etc.) are on board with the show, its degree of success once it has been completed can be limited. It is therefore critical for the producer to meet with the ancillary groups early in the production process and then on an ongoing basis. The purpose of these meetings is to get these individuals excited and invested in the property. Keeping them up to date on the story status, character and locations designs, color artwork,

voice and musical talent especially when stars are attached is all very helpful. (For a detailed perspective on working with ancillary departments, see Chapter 12, "Distribution, Marketing, Licensing, and More.")

Would You Marry Your Co-Producer?

Irene Weibel, Producer

Co-productions are like a marriage. The relationship requires great and constant communication, adaptability, openness to compromise, and deep-seated commitment, as you will be spending many years together. With that awareness, you need to get into this type of business structure mindfully, choosing a partner you believe in and with whom you can weather the many ups and downs of animation production. Like any relationship, some co-productions are smooth sailing and others are rough; sometimes a separation is inevitable, and others are salvageable as problems are solved and reconciliation is reached. Here is the story of one co-production that started off rough, stopped breathing completely at one point, and then came back to life better than ever.

We had gotten the green light to start production on a well-known brand for a television series. I was responsible for the development of the property in addition to identifying a co-production partner, structuring the deal and managing the co-production itself. It made sense to seek a French partner on many levels. First, the property itself was French and popular in Europe, which could drive higher license fees from some French territories and better broadcast support in that region. Furthermore, this arrangement would facilitate shared risk between the two studios as well as the opportunity to secure additional financing from France. To that end, we found a perfect partner. We thought this particular studio would be an excellent partner for several reasons, including past experience with some of the principals, proven animation quality, and a respectable track record in delivering episodic television. After many conversations, we all agreed it was the right relationship to pursue. The next step was to establish our two companies as treaty co-producers. This means that the relationship would be recognized as an official co-production between two companies in two regions whose governments have signed a co-production treaty, thereby enabling the shared production to be considered local content in both countries—much along the lines of an international marriage license, if such a thing were to exist.

Once the agreements were in place, we launched our efforts in a positive and positively organized way, dividing up work by outlining a clear production pipeline of shared responsibilities between the two studios. We were well into pre-production in some respects—writing scripts, designing characters and testing the production pipeline—when the challenges emerged. Although we were happy with the materials, we continually had problems securing approvals from another rights holder on the project, essentially getting pushback from all angles. This lack of agreement affected key elements from a macro to a micro standpoint, halting progress on everything from overall art direction to storyline and scripts, character eye shapes, and proportions. The stress level and tension began to rise as decisions and approvals needed to move much faster in order for us to stay on budget and schedule—both of which were very tight—for this series. And though we did our best to try to sort out what was wrong, time and again, nothing felt right and there was no compromising.

As both studios had invested a significant amount of time and resources in the project and committed to making this a success, we decided to push forward, hoping that we just needed to ramp up and build momentum and maybe

that would solve our troubles. We tried for a while, but to no avail. It seemed as if nothing could move forward, leaving us at a standstill. We had the unfortunate realization that something more drastic was necessary to solve our dilemma—it was time to separate. Putting money aside, our company made a very difficult decision: we chose to shut down production rather than keep it going. We could not afford to produce something that no one would be happy with, especially as the property was one we controlled and needed to ensure remained intact.

As you can imagine, rolling this out to our partner was very difficult. We had an upset co-producer who had the right to be upset. We had to deal with the financial impact on their studio and make good on our commitments, keeping in mind that our handling of the situation would determine whether we would ever work with this studio again. Next, we had a big number to write off and time lost that could never be recuperated—a painful pill to swallow but necessary medicine to accept and process. Third, we owned a property and we did not know whether we would be able to restart it. And on top of it all, we were depressed—it was the first time we had ever been defeated, having given something our best shot but still not able to make it work.

But this story has a happy ending. The shutdown allowed us time to rethink some of the elements of the show. It resulted in the shuffling of some key crewmembers on or off the project, which gave the relationship a new perspective and attitude. A number of in-person meetings between the two studios further rebuilt the relationship a la "marriage encounter" seminars, and the project was relaunched with great momentum.

Each party came back to the table with a renewed energy that included a stronger creatively aligned approach to the series and a renewed respect for what value each entity brought to the project.

Looking back on this experience, I believe it was a very positive one, as we learned a lot. Here are the key points that I would like to share so that maybe you can avoid some of this hardship in your co-production efforts:

1. Don't rush into production. Really. Don't rush into production. Before you start, make sure everyone is on the same page creatively and process-wise. You need to bank some scripts, create your key designs, and make sure that you have the approvals you need to in order to proceed into the fast pace and daily grind of series production.
2. Get buy-in or consensus—even before you need approval. Pushing for an approval that people are not on board for is much tougher than building consensus early on in the creative process.
3. Work hard to get the right team together and keep churning through until you have the right key players involved. Don't be afraid to bring new team members into the mix and push out those that are not working.
4. Focus on moving forward and the future potential; don't let individual egos or desires get in the way of the bigger picture.

The key to making the marriage of co-production work is realizing going into it what exactly you are in for and reminding yourself of these early choices and decisions along the way. Producing animation episodic television is not for the faint of heart. Be brave. Be strong. Keep your head about you—for better or for worse. In the end, the relationship is worth all the effort!

Design and Art Direction

Next to having a solid story, the visual style of the project is the most important area for the producer to focus on. Because every element in an animated project needs to be designed and created by artists before it can be built or animated, it is crucial to allocate adequate time and money to seek out the ideal talent. The

strength of the show's design not only helps sell it, but also entices other artists to join the team.

The "look" or design of a show is created through both line drawings and color artwork. The style of a show can vary from cartoony to realistic to highly stylized. The project's target audience also greatly affects the art direction: appealing to a preschool viewer requires quite a different artistic approach versus aiming for a prime-time adult viewer. It is the job of the production designer and/or art director to follow the director's guidelines and to both lead and supervise the development of the stylistic choices for the project. On some projects, there are no strict differences between the roles of a production designer and an art director. On features, the distinction is typically that the production designer establishes the actual look of the film by creating character and location designs. This job is usually completed after the design of these elements is complete, although it may continue in a supervisory role through the model building phases on a CG production. The art director's role, on the other hand, is to take the design and apply it to film—that is, taking the location design and creating layouts. The art director also works with color stylists and surfacing artists in order to devise a color palette for the project. Depending on the production budget and its format, the art director may work with a handful of artists or have dedicated crews working on each element, such as character design, background painting, color modeling, character and set modeling, and surfacing. On a CG project, the visual effects supervisor also plays an important part in establishing the overall look and feel of the film, partnering with the art director and/or production designer. They are jointly involved in facilitating the modeling and surfacing efforts, and they also oversee the *look development* stage, wherein early lighting tests are generated to ensure that the established concept look is being properly emulated in CG.

The design phase of a project can be its most exciting stage. It is the time to invent a new world and create characters that fit the part. If budget allows, the director, producer, production designer, art director, and key department supervisors should travel to the location where the story takes place (if such a place exists other than in the imagination). The purpose of this research trip is to explore and develop a more intimate understanding of the environment depicted in the show. By shooting videos and taking photographs, the artistic team attempts to capture the reality from which they create the imaginary world. On projects with limited budgets, the Internet is an invaluable resource, but the producer should also make certain that enough funds are allocated for the acquisition of reference material so that the artists have access to books and DVDs for further inspiration. The

production management team takes this material and logs it into the tracking system, making it available for the applicable shots and immediately accessible for the artists as reference.

In order to create the animated world, three design categories must be developed: *characters, props*, and *locations/environments*. Characters are divided into two sections: main and incidental. The primary actors in the story are called "main" and the secondary actors are described as "incidental." Props are objects that interact with characters and animate or move, such as a vehicle. Locations/environments are the actual places or sets in which a scene takes place. As with characters, both props and locations may also be given greater or lesser priority in design and build efforts, based upon how much they interact with characters or their overall significance within the story.

From the onset, it is essential for the director and the producer to be in sync as to what kind of artwork best suits the project. One important issue that should be addressed at this stage involves the show's aesthetic requirements versus its budgetary limitations. For example, factors that should be of primary concern in digital 2D are setups in which a character is rotating while the camera is moving at the same time, or the use of a plaid pattern. On CG projects, the producer should be mindful of the number of realistic furred or feathered characters in his or her project, plus general interpenetration and render issues related to character design and look complexity. This is the stage at which the producer must assess whether the additional time taken by these artistic choices merits the extra money and talent required. Ultimately, will the telling of the story be flawed if these steps are simplified? Both the producer and director should reach a consensus in answering these questions.

Once the script is thoroughly vetted for complexity analysis based on the selected artistic approach, a list of needed assets is created. This list notes the main designs for characters, props, locations, and effects (if applicable), which—once designed and approved—are organized into the *visual style guide* and *model pack*s. The visual style guide encompasses all design elements; the model pack denotes artwork that is needed only for a specific sequence or television episode. Designs are then created based upon this comprehensive list of assets needed.

The Visual Style Guide

Once the style of the project has been nailed down during development, a visual style guide is produced. This guide is created to convey basic design information to the entire crew on a production and to ensure the overall consistency of the project.

Although it can be time-consuming and costly to create a comprehensive style guide, its completeness will greatly enhance the project's production value. The more information artists have, the better they can delve into the imaginary world and bring out the best the story has to offer. This guide is also informative to a project's ancillary efforts, providing accurate reference to those creating video games, consumer products, and marketing materials, for example.

The visual style guide can be incredibly detailed or have just a few items. The producer and director work together to choose the items to be designed based on the story needs and budget limitations. It is consequential for the producer to establish with the director the approximate amount of reuse or recycling of drawings or assets expected on the production. In features, the rule of thumb for locations, for example, is 30 percent reuse whenever possible. However, it all depends on the story. If, for example, the characters are on a journey traveling from one land to another, it may not be possible to reuse locations. The producer therefore must devote sufficient funds for the creation of locations/environments or sets. This is a perfect example of why the producer

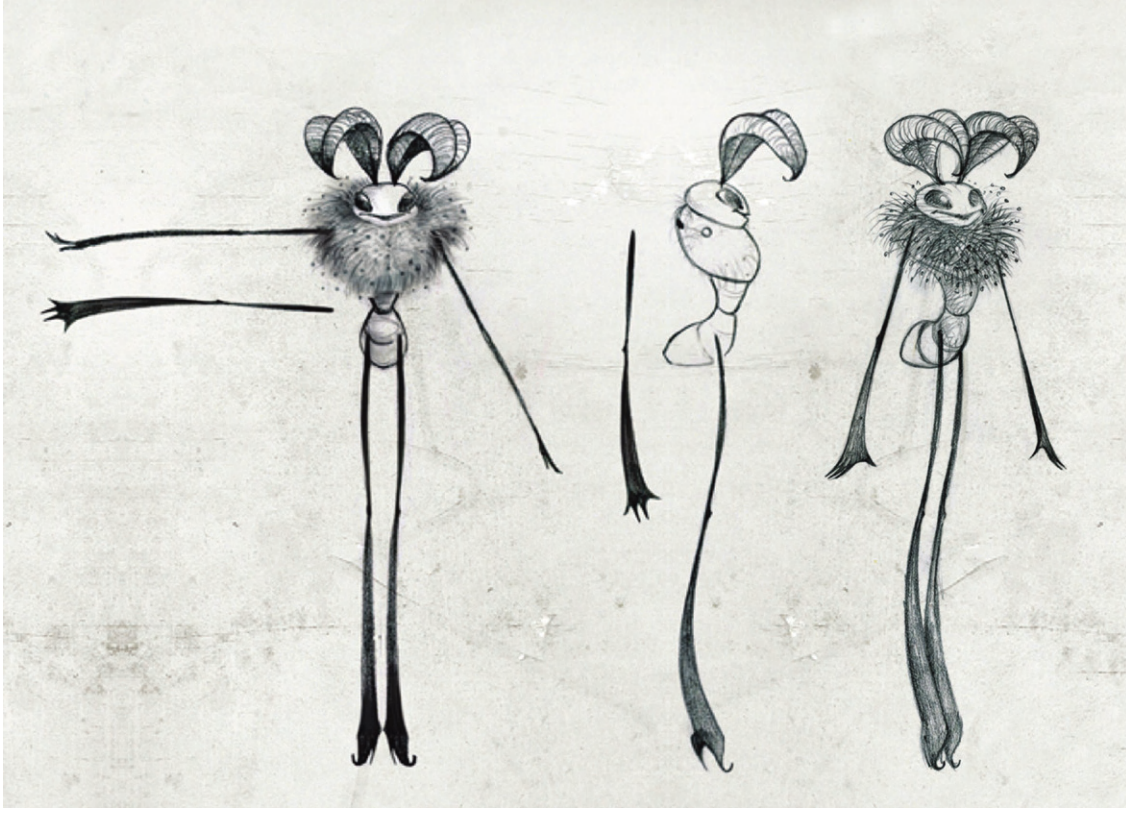


Figure 8-1 Character poses of Luna.

and director need to communicate well and share the same vision for the project.

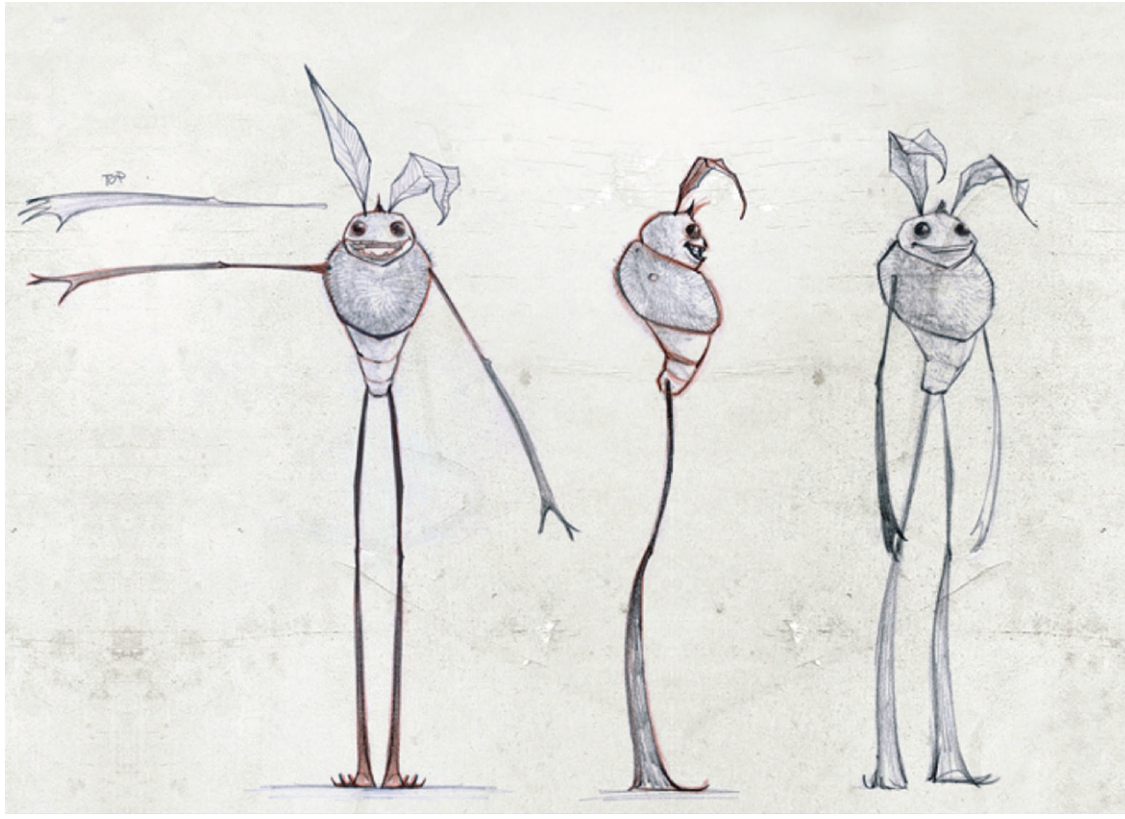
Character Designs

Visual development artists first develop character designs, and these designs can be created with line art, digital renders, or a combination of the two media. This work is then further refined by the work of character designers and supervising animators, who help finalize designs and then craft further character details in order to facilitate consistent animation. These detail pieces may include mouth charts, hand charts, key poses, and special costumes for each character.

The style guide typically includes a series of model sheets that cover the following areas for character design:

- Character poses (front, back, side/profile, and three-quarter views; see Figures 8-1 and 8-2 for partial examples)
- Character in action
- Face shapes and expressions (surprised, elated, angry, and so on; see Figures 8-3, 8-4, and 8-5)

Figure 8-2 Character poses of Silky.



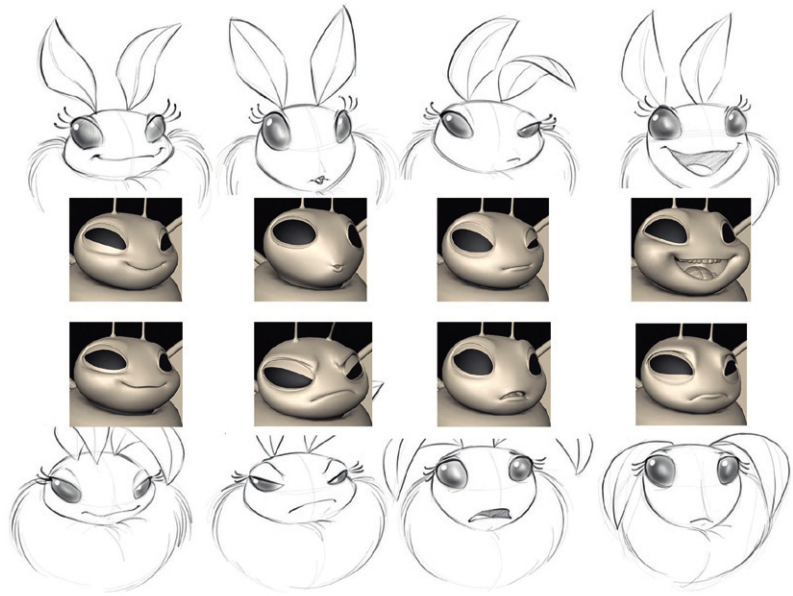


Figure 8-3 Face shapes for Luna.

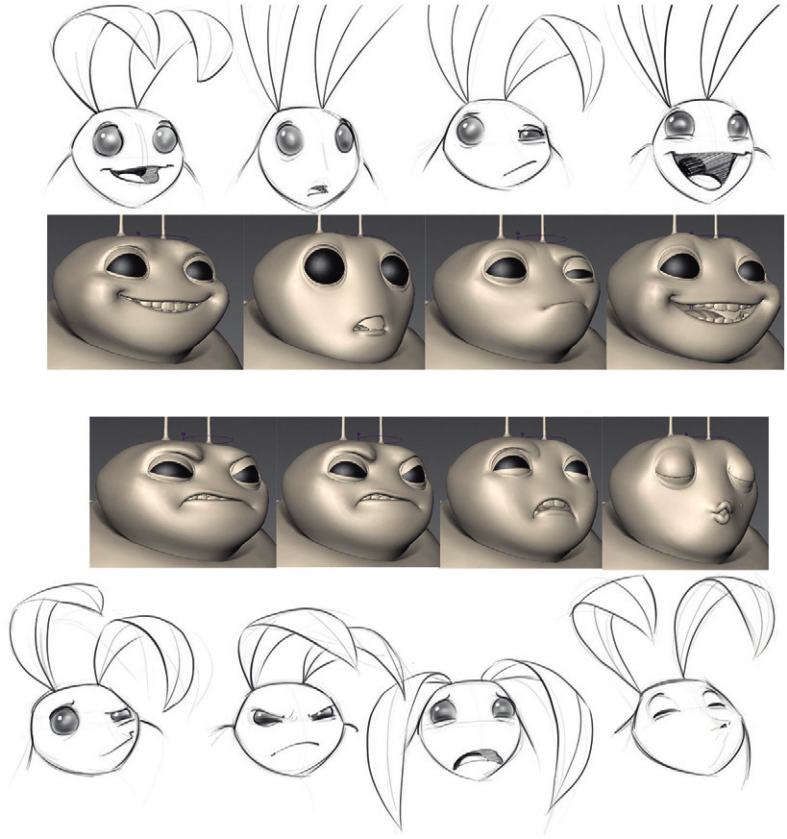


Figure 8-4 Face shapes for Silky as a moth.

- Character lineup showing the scale of all characters in relation to each other (see Figure 8-6)
- Character's orthographic construction (basic shapes showing structure and details of the character's body parts)
- Mouth chart (close-up of the character's mouth as it forms different sounds)
- Hand chart (key positions to show how the hand maneuvers for digital 2D use)

Some projects also find it beneficial to make physical models of the main characters, called *maquettes*, to be used as aides for animators and modelers (if applicable). In CG productions, working with clay sculptures first can help the modelers envision how to properly translate more graphic designs into CG models in a relatively quick and cost effective way.

Location Designs

Location designs, or sets, are created by the production designer and/or a location designer. These can be designed traditionally with pencil and paper, or created digitally, or a combination of both techniques. The style guide typically includes the following items for location designs:

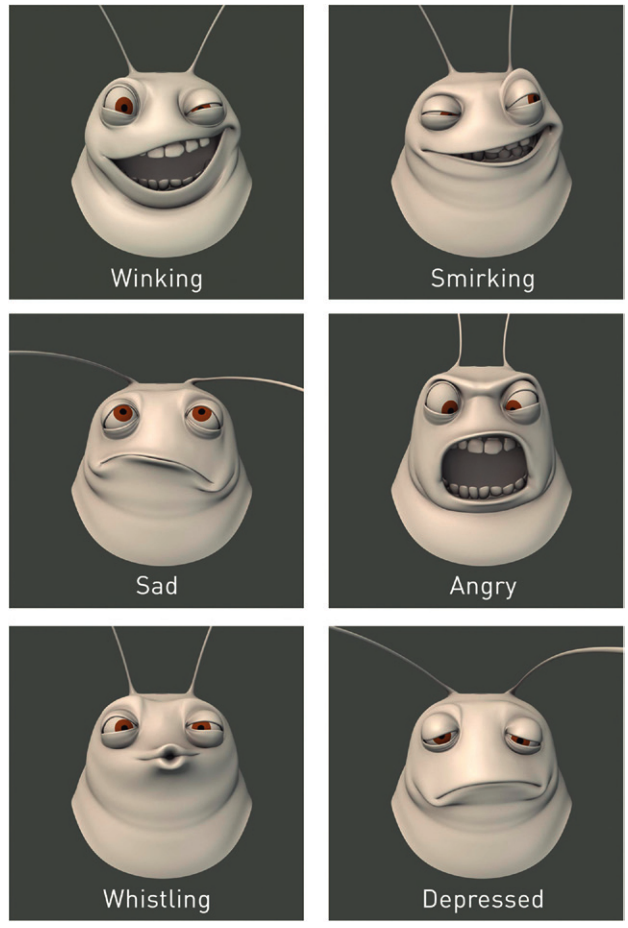


Figure 8-5 Facial expressions for Silky as a caterpillar.



Figure 8-6 Character size comparison.



Figure 8-7 Location design.

- Exterior shots (including establishing shots as well as close-ups; see Figure 8-7)
- Interior shots
- Reverse-angle shots
- Scale reference (to show relationship to characters)
- A "schematic map" of the overall setting or environment

Some projects also find it beneficial to make practical models of key locations early in pre-production to be used as aides in cinematography and digital modeling (if applicable).

Prop Designs

These non-character objects (such as vehicles, weapons, and furniture) are created by a prop designer. Once again, this work can be achieved via line art or digital renders. The style guide covers the following areas for props:

- Front, back, and interior (if applicable)
- Construction (if the prop has complex elements; see Figure 8-8)
- Size comparison to character(s) and/or background layout (see Figure 8-9)
- Guidelines on how the prop works (if it is a complicated device)

Effects Design

Pending the requirements of the script and the budget, there may or may not be an effects design component in the visual style guide. For projects that are outsourced, it is always useful to include references for how elements such as fire, dust, smoke,

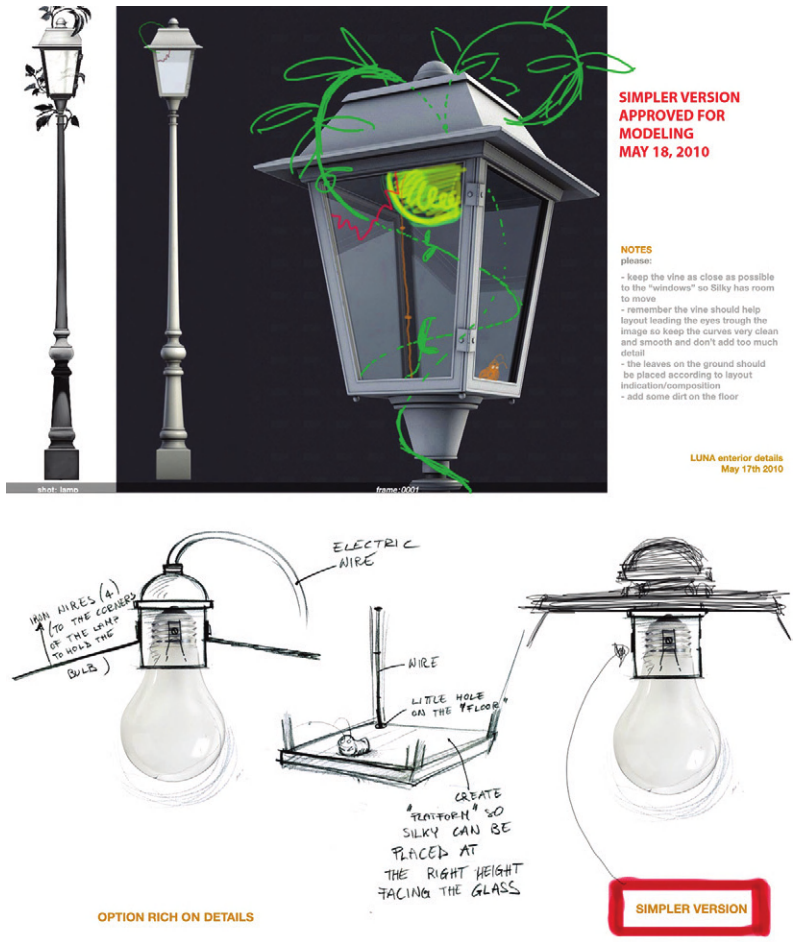


Figure 8-8 Prop design.



Figure 8-9 Set and character comparison.

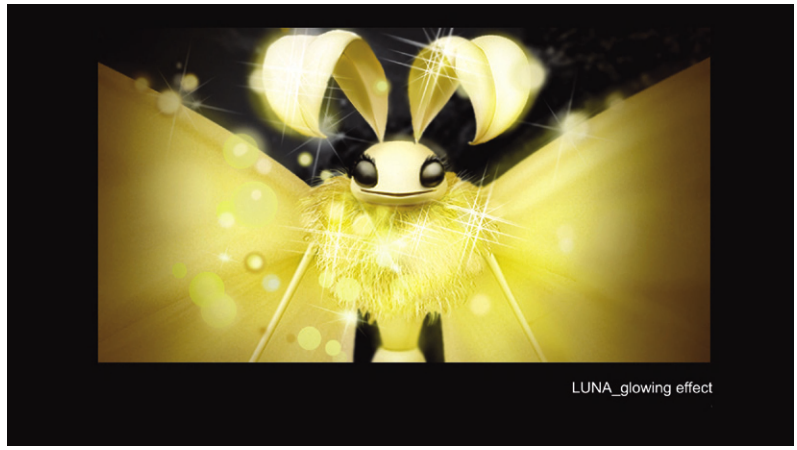


Figure 8-10 Glow effect design.



Silky



Luna

Figure 8-11 Lighting keys.



Figure 8-12 Lighting script.

and so on should be treated. (See Chapter 9, "Production," for more details on effects.) Figure 8-10 is an example of effects design reference for the glow in *Luna*.

Color Script and Lighting Keys

The art director maps out the palette for an animated project by creating a color script for a feature, or color keys for a shorter project. Essentially thumbnail representations of key shots and moments in the story, the color script establishes the hues, tones, and ultimately, the mood of the imaginary world. This information is used by color designers, background painters, surfacers, and lighters as guides to instruct their work.

Black-and-white sketches—often referred to as lighting keys or a lighting script—may also be created to further inform lighting efforts through use of tone and shadow. Figures 8-11 and 8-12 are examples of lighting keys and a lighting script for *Luna*.

Color Design

Under the guidance of the art director, characters and props are colored by color stylists using 2D software or look development artists in CG. In the case of a character design, the color of

the costume, skin, and hair color is tested in different environments (interiors, exteriors) under different lighting scenarios (day, night) before it is set, and some digital paint systems allow for the creation of various palettes per character to accommodate easy switching from one color scenario to another. The creation of a character color lineup is important to see how all the characters relate to each other and to assist in the establishment of visual themes (for example, all villains may be in tones of purples and browns, while the protagonist wears brighter colors).

Model Pack

After the overall visual style guide is created, more detailed model packages are generated on a per-sequence basis for long-form projects or a per-episode basis for television. These packages include additional design details as needed for main characters, incidental characters, props, and locations specific to the particular sequence or episode. As in the visual style guide, the degree to which designs are fleshed out depends on their importance to the story and the available budget. In some cases, there may be only a front and back design for certain characters, though other more prominent or complex characters would require additional drawings, including more detailed body poses to express a certain key physical trait or action; movement illustrations for hands, hair, and clothing; and a wider range of emotional expressions.

The production manager or an assigned APM/PDM is responsible for prioritizing the order of design and building assignments and tracking the progress of the artwork created. They manage the design schedule for the artists, making sure that the assignments are being delivered on time and are promptly reviewed by the department supervisor and/or director for notes. Potential revisions should always be anticipated when planning; however, when the director asks for changes or additions beyond the anticipated scope, the production manager or APM/PDM evaluates its impact on the schedule and informs the producer. Every time there is a revision to the script, the design list and model package is updated to reflect these changes on characters, props, and locations. If the model pack has been distributed, all newly revised designs need to be replaced in the model pack and production tracking database. This process has been made more efficient on productions that can update the model pack online and automatically alert all artists who can be potentially affected by the design revision. In television, generally speaking, these packs are “locked” and aren’t changed once the subcontractor has started working on the project. Although it is highly advisable to complete all visual development prior to start of production, designs tend to evolve alongside production on feature projects. For this reason, the producer must

budget and schedule for the design elements accordingly, ensuring that designs are ready and final in enough time to commence asset production or, in the case of traditional 2D, the start of layout and animation; if not, production can be affected.

Asset Production

The traditional animator draws out poses to bring a character to life; in contrast, on digital 2D and CG productions, the animator relies upon the use and manipulation of assets in order to create a performance.

2D Asset Production

Creating assets in the digital 2D realm includes the following steps:

- Design/color
- Symbolizing
- Rigging

Design/Color

The first step in creating a 2D asset requires a cleaned-up line drawing that has been scanned into the production pipeline. Under the guidance of the art director, the color stylist assigns and applies color to the line art in preparation for symbolizing the model.

Symbolizing

The best way to think of how a character is symbolized is to imagine a paper cutout puppet and how each part is broken out into separate pieces (such as arms, hands, body, legs, etc.) and then assembled in order to animate the character.

As each individual piece is digitally traced and saved for reuse, it becomes a symbol and must be labeled and categorized appropriately in the project's library for the animator's easy access. A typical character asset might consist of 20 or more of these symbols, one for each movable body part. It is typical for this task to be completed by an assistant animator or a character library builder.

Integral to a successful library and management of assets on a digital 2D project is a clear and coherent labeling system. Depending on the style of animation and how the production pipeline is set up, the library build can start with a character's five-point turns, showing him or her in key poses (front, 3/4 front, profile, 3/4 back, and back). This approach is suitable for the type of animation that is highly limited and is set up to rely heavily on reuse of assets. On productions with a minimal budget, the library is also likely to include stock props and effects.

Rigging

In order for the artist to generate animation, he or she must control and manipulate the assets. This is accomplished through rigging the models whereby the symbols are combined to form the complete character and their pivot points are selected and adjusted for the desired movement.

CG Asset Production

The general steps involved in the asset production process are:

- Modeling
- Rigging/articulation
- Surfacing and look development
- Research and development (if applicable)

Each of these steps are best undertaken with the support of knowledgeable technical directors and CG supervisors who are familiar with the overall creative goals of the project, the technical micro details of each phase, and the macro view of how the entire production pipeline functions. A key consideration at this early stage is control of the amount of simulation (such as hair and cloth) required by a design and its testing.

Modeling

Using the information provided in the visual style guide as reference, modelers build the characters, environments, and props within the CG pipeline.

There are a number of ways to build an asset in CG: digitizing a 2D design that is then modified as it is given volume and dimension; starting with basic 3D geometric shapes, also referred to as polygons, which can be fused together to create the initial model; or scanning a maquette as the starting point for a wire frame model. Whatever method of building that is utilized, a single modeler (or possibly a team of modelers) can take portions of the model and refine them at the same time. Once all of the sections have been completed, one modeler assembles them and cleans up the joining sections to create one homogeneous piece. This piece often looks like a wireframe sculpture (see Figures 8-13 and 8-14) that is then "skinned" to give it a more solid look, almost as if it is sculpted out of gray clay (see Figures 8-15 and 8-16, and find a more in-depth look on the Luna case study website as denoted by the ➤ symbol). This skin is the foundation upon which the surfacing process takes place further down the asset production line.

A *proxy model* (a less detailed "stand-in" version of a model) can sometimes be created quickly and used to allow pre-vis

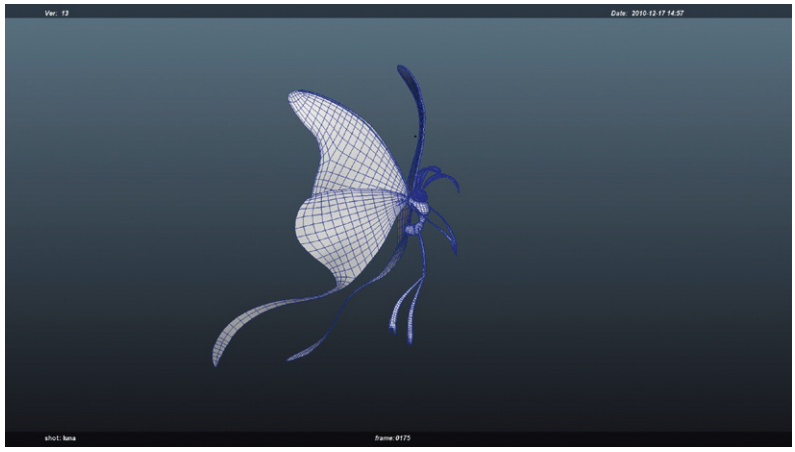


Figure 8-13 Wireframe for Luna.

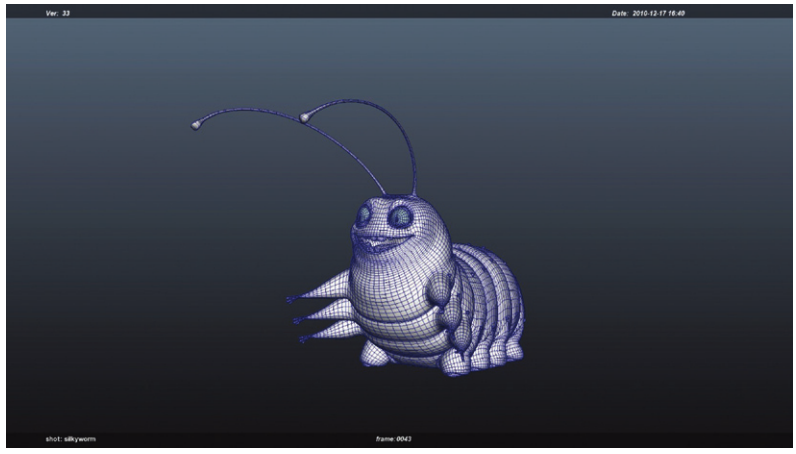


Figure 8-14 Wireframe for Silky.

work to begin while final model building, rigging, and surfacing are still in progress. These temporary models are generally quite limited in their capabilities and must be replaced with fully functional rigs by the time animators need to work within a shot.

Rigging/Articulation

Rigging or articulation is the process in which a character or prop model is given inner structure—much like a skeleton and tendons—and controls that allow for it to move around as directed by a character animator or an effects animator. After the model is rigged, when one part is moved, the rest of the model moves accordingly. The rigging team provides animation controls that are extremely detailed in their function, and yet user-friendly for the animators. To that end, the riggers collaborate closely with the animators, testing characters with a variety of



Figure 8-15 Skinned geometry for Luna.

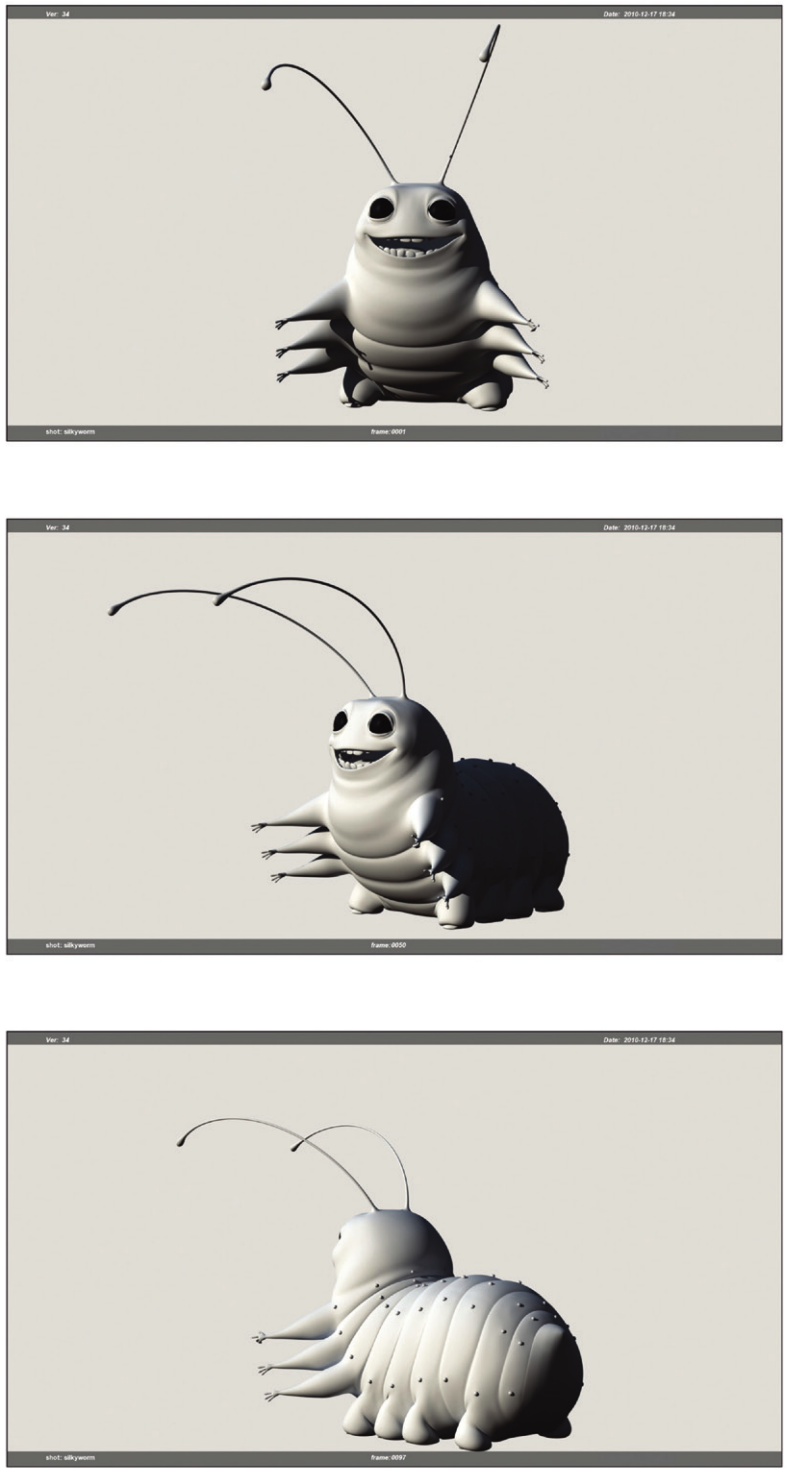


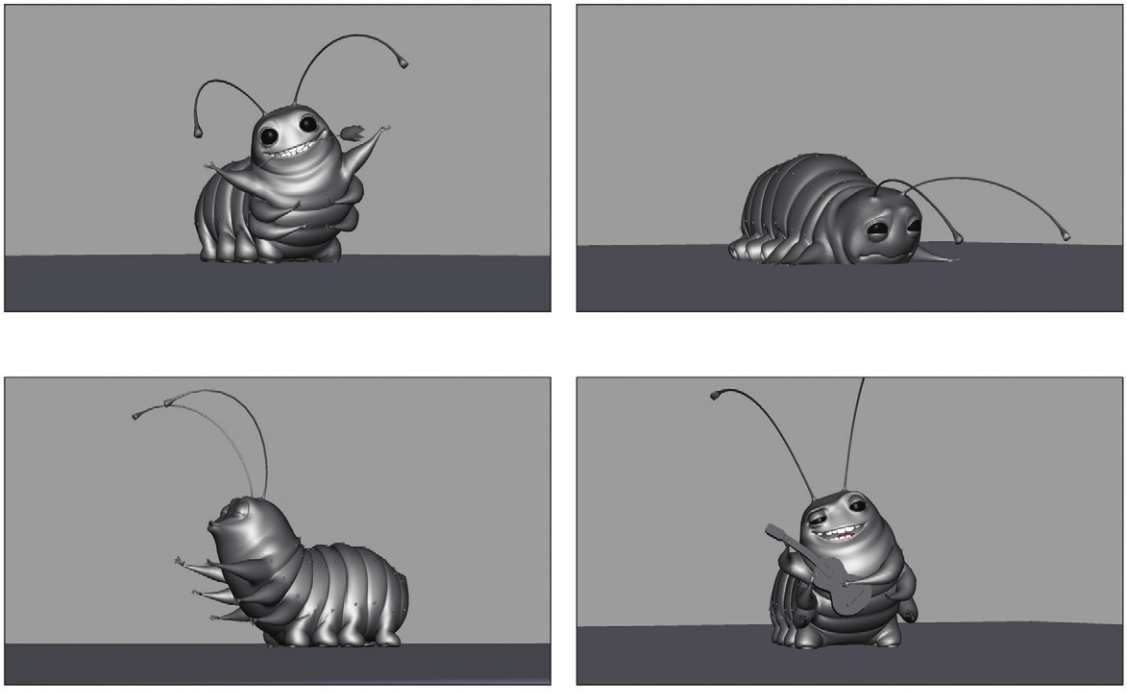
Figure 8-16 Skinned geometry for Silky.

full-body calisthenics and facial exercises to make sure the rigging provides them with the desired movements. At times, these tests will also reveal that a particular model may need reworking—for example, the jowls on a character may be too loose to be animated in an appealing way, or the stomach may be too large to manage when a character bends over. Once the model notes are addressed, it is returned to rigging for further development and testing. After rigging is complete, the model/rig is ready to undergo surfacing. See Figure 8-17 for an example of rigging test poses from *Luna*.

Surfacing and Look Development

All CG character models, environments, and props need to undergo surfacing in order to appear to have the furry, shiny, wooden, plastic, metal, or other look required by art direction. The surface treatment of a model is referred to as *texture*. This stage of asset production is undertaken by the look development team and is in some ways similar to traditional background painting and digital color styling. When creating textures, the main thing to establish is how to combine light and color to get

Figure 8-17 Rigging test for Silky.

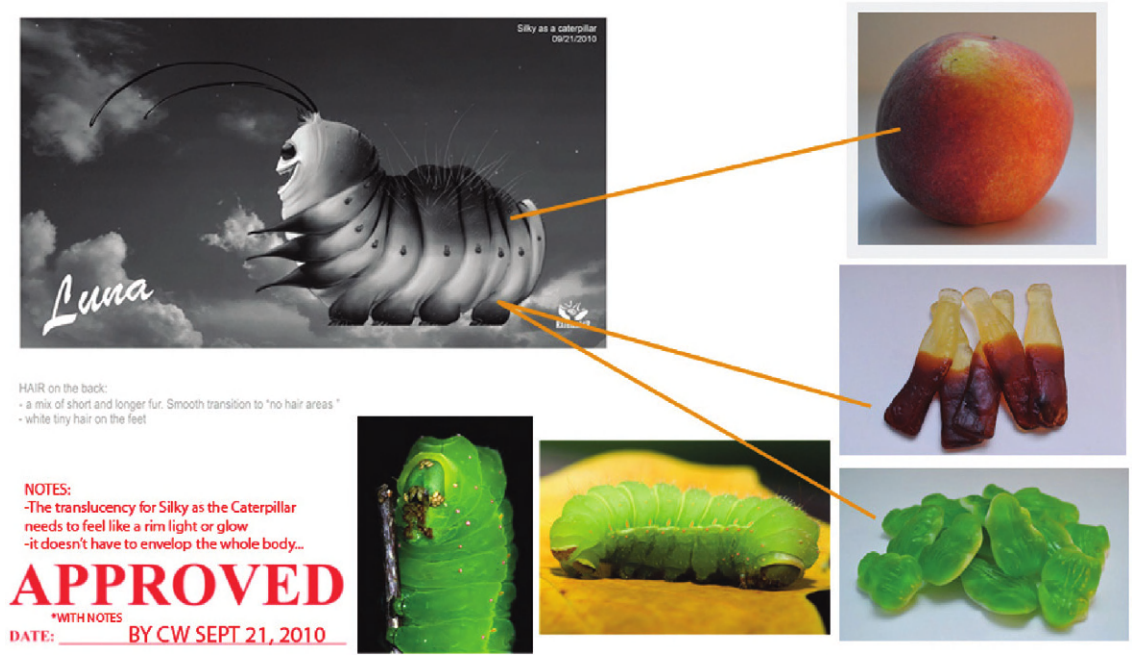


the desired look. A few questions to ask when developing a texture include: *Is the model opaque or translucent? Does it reflect light and/or emit light? If so, to what degree? How dark are the shadows on the surface?* The answers to these sorts of questions allow the texture artist to head in the right direction.

During production, the look development team, overseen by the visual effects supervisor, collaborates closely with the art director to address the surfacing needs. Depending on the complexity of the surface, it can be a very lengthy process before the final texture is developed and approved. Ample lighting tests should be run to ensure that the textures remain intact under the variety of lighting conditions called for in the project. For instance, does Rudolph the Red-Nosed Reindeer's nose look red in both night and daytime lighting conditions? Likewise, animation tests need to be run on characters and props to see if surfacing holds up when in action: for example, it is important to know that feathers or fur still look good on an animal when it moves, or that a finish on a vehicle is not distracting when it is put in motion. Models must have fully established surfacing before character finaling, lighting, and shot finaling work can commence. See Figures 8-18 and 8-19 as examples of look development work from *Luna*.

Once the surfacing is complete, the model is considered final until it undergoes the rigor of production during which modifications may be necessary. Again, this is a step for which strong technical direction support is a necessity.

Figure 8-18 Look development: Silky as a caterpillar.



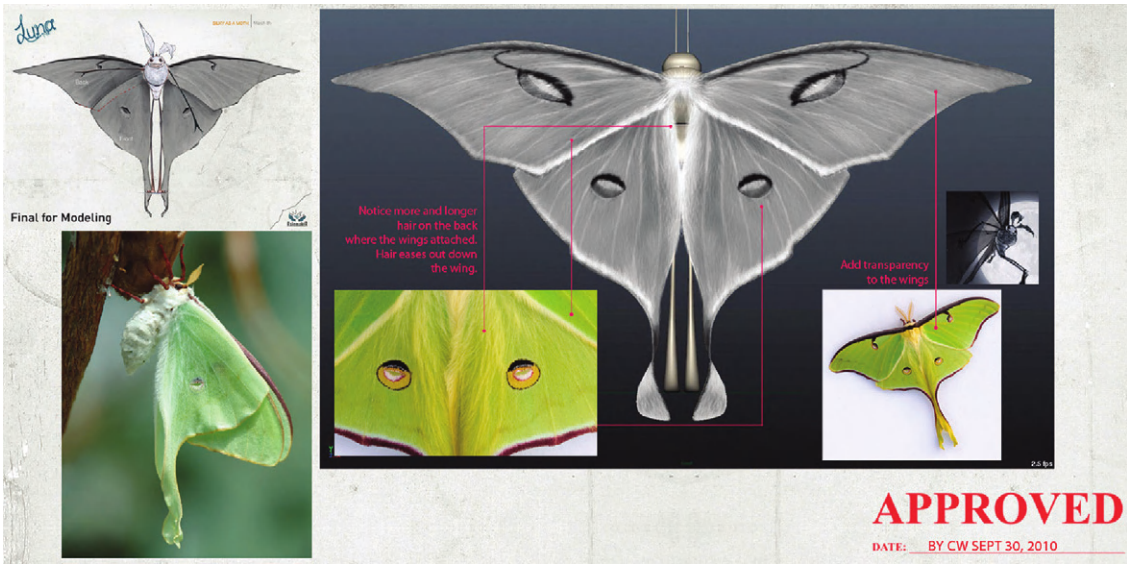


Figure 8-19 Look development: Silky as a moth.

Research and Development

It is ideal to launch research and development efforts on CG assets that are crucial to a production yet may provide particular technical complexities along the way. Examples of such elements include the behavior of Rapunzel's hair in Disney's *Tangled* or the rigging construct of the raining hamburgers in Sony's *Cloudy with a Chance of Meatballs*. Even outside of the asset production pipeline, effects work may require early research and development, especially if a weather, water, or explosion effect is prominent within the project. For instance, the water in Disney/Pixar's *Finding Nemo* and the fire destruction involved in DreamWorks' *How to Train Your Dragon* were both extremely important to create and manage well. Although it may be challenging to allocate money and manpower to these efforts early in production, the ultimate cost savings of getting them right from the start is considerable.

The Voice Track

The right choice of actors during casting, combined with a great performance during the recording, are two of the most critical steps in the production process. Because the voice track serves as a guideline and a source of inspiration for the

animators, if it's weak, not even the best animators can produce good performances. The animation, timing, and overall success of the project therefore hinge on the quality of the voice track.

Casting

Casting is the process by which actors are chosen to play parts on the project. It is the producer's job to determine the casting expectations of the buyer/executive, seller (or creator), and director in order to drive the process in the right direction from the start. When stars are attached, their names can be used as marketing tools. It therefore needs to be established early on whether the project can afford well-known actors and wants to pursue them. Prior to the start of casting, it must be decided whether the production is going to be union or non-union. If the show is non-union, casting choices can be limited. Most professional actors are union members and are prohibited by SAG or any other acting union from working on non-union shows.

Casting begins when a casting director is hired onto a project. Large studios usually have their own in-house casting department. Smaller studios tend to hire a casting director on a freelance basis. It is the producer's job to share with the casting director the amount of money and time allotted for casting sessions (auditions), the rehearsal of the script, and the recording of the voice track. The casting director then works with the producer, director, and creative executives to come up with a list of potential talent to audition. A brainstorming session takes place, at which everyone suggests ideas for talent based on the characters to be cast. At these sessions, reference artwork is helpful for inspiration. Following the creators' and/or directors' prerequisites for the voice talents, the casting director begins the search for actors.

Once a casting list has been made, the casting director uses the script, to prepare a character breakdown for each role, and selects audition materials for all voices to be cast. The next step is to either contact his or her roster of agents or log onto established voice-over websites to upload the audition materials and character breakdowns. Using the website as a resource, the casting director can select the agencies that are to participate in the auditions and request a specific talent they represent, or allow the agencies to disseminate the auditions details to their talent pool as they see fit. Once the agencies have completed their in-house selection process, they submit their picks to the casting director. This pre-screening process gives the casting director a sense of whether the talent selected so far is on the right track without having to spend the time and money for a studio audition. He or she culls the auditions and flags his or her top

selections for the producer to listen to. The producer and the director then narrow the list and have the casting director set up auditions in a studio.

In cases in which "star" talent is being considered for a role, the casting director has the careful balancing act of timing when this information gets communicated to the agents. Some star talent will not audition for animation. This talent is referred to as "offer only." As a result, if a phone call is made to the agent and the actor is interested, the creative team must be willing to greenlight the actor without hearing him or her. Most experienced casting directors know who will and will not read for them. In such cases, the casting director can pull previous audio recordings together for the producer, buyer, and director to listen to for reference. Everyone including the casting director, voice director (if applicable), buyer/executive, director, and producer should be completely in sync in terms of who they want to go after and what strategies they will use to get the actor to sign on. If budget allows, it is good to create an animation test of the character in question by using a few lines of past audio work from the star talent being considered. This effort can have dual benefits: it allows the producer and aforementioned casting decision team to see whether the voice really complements the character design; if it does, such a "teaser piece" can make the offer all the more appealing to the star talent being pursued.

In order to prepare talent for an audition, specific material should be sent to them before the casting session and should be made available on the actual day of the session. For a large project, a casting coordinator may be hired to help the casting director. It is the casting coordinator's duty to schedule talent for auditions (a typical audition slot for animation is 5 to 10 minutes of record time for the actor), process any necessary paperwork (including union forms and confidentiality agreements such as a nondisclosure agreement, or NDA), and prepare the following materials:

- **Sides:** portions of the script specific to a character that best reflect their personality. These sides are read by the actors and recorded during the casting session. The casting director, voice director, or producer usually chooses the sides.
- **Character description:** all information pertinent to the role such as the character's gender, age, overall personality, and vocal quality. Character designs may also be included as part of this package.
- **General information sheet:** the call time, location, and parking instructions for the recording facility.

The casting session takes place in a recording studio. Generally, the producer, director, and casting director attend these sessions. Though the project director usually conducts the

talent in these sessions, there may also be a separate voice director hired to direct and communicate with the talent, as some animation directors are not comfortable playing this role. For clarity, in this book, the individual responsible for directing the actors in sessions is referred to as the *voice director*. The voice director has the actors read their sides individually or with other actors playing opposite parts. Working with the casting director, the producer is responsible for keeping the session moving on schedule, allowing for extensions with certain actors and changes throughout the day when people drop out or arrive late.

After the director and/or producer select the preferred performances or "circle takes," the chosen lines are edited onto a final listening compilation. Selected takes, along with a list of talent recorded, are given to key team members such as the buyer/executive for review. Each person listens to the takes, makes notes, and ranks his or her choices. The casting director gets everyone's feedback and sets up callbacks. The purpose of callbacks is to re-record the talent in order to finalize casting. The original list is trimmed down significantly for these sessions. It is important to note that if you have a third callback for the same actor, SAG rules state that the producer has to pay for this and any additional sessions. If none of the voices fit the part, further casting efforts may be necessary. The final choice of talent is a multi-faceted consideration. Actors are chosen based on vocal quality, ability to bring the character to life, star power, versatility, availability, and how their rate works within the project's budget. In those cases in which there is a tie between actors for a part, the buyer or the creative executive usually makes the final casting decision.

Whereas standard fees are generally discussed between casting directors and agents prior to auditions, some negotiations are necessary once casting decisions have been made. These negotiations would pertain to union actors paid above scale or non-union actors paid above the flat rate. The discussions regarding fees are generally conducted by business affairs in concert with the producer and creative executive/buyer. In case there is any visual likeness to the actor in the design of the character they are playing—which sometimes happens with star talent—the design needs to be legally cleared in advance. Other issues to be agreed upon for star talent are fees, size and placement of credit, and publicity. In the case of musicals, the topic of singing needs to be discussed. If the talent cannot sing, another voice will be used to perform the songs. If the talent can sing, there will be a different rate paid, and the details of soundtrack royalties must be addressed. The business affairs person negotiates with the star talent's representative regarding the actor's willingness to conduct interviews and his or her availability for other promotional purposes. Generally, star talent is paid a fee to take part in promoting the project.

Rehearsal

Before going into the recording booth, it is ideal to have a table read or rehearsal with all the actors. At first glance, setting aside funds for a rehearsal may seem excessive, but this practice has proven to be very beneficial. Actors are almost always appreciative of rehearsal time. Realistically, it may be impossible to insert additional time and money in the production of episodic television or to try to assemble star talent for a table read, but it has been done, especially for prime-time shows. A table read allows the cast an opportunity to read through the entire script in one day. This exercise enables the actors to have a better grasp of their own part in relation to the other roles. They also learn how the various characters in the story are being interpreted. If the show is a comedy, the actors can benefit from playing off of each other during rehearsal, which often leads to better, more effective delivery and timing. At the same time, they get input from the director, producer, and any executives, thereby improving their performance. Based on the success of the table read, the producer and director may choose to record several actors at the same time in order to benefit from the ensemble acting.

After the rehearsal, actors tend to nail their lines on the first or second take, saving the production a substantial amount of recording studio time and money. Another important advantage to a rehearsal is for the director and producer to ascertain which parts of the script require rewrites. It is far more efficient to get the revisions incorporated into the recording script rather than try to set up additional recording dates or try to fix the problems in ADR. (For more information on ADR, see Chapter 10, "Post-production.") It should be noted, however, that some directors prefer spontaneity and do not request a rehearsal. This form of recording—without rehearsal—is called a "cold reading." In this approach, directors like to see how the actors handle their part initially and then give notes. It is up to the producer to confer with the director and decide what procedure works best for the production.

Session Preparation

Once the rehearsal and recording dates are established, the appropriate facilities must be set up. If star talent is selected, one of the following individuals may be responsible for contacting the agents and booking his or her time: the creative executive, the producer, the casting director, or the post-production supervisor. Typically, however, the casting director and/or his or her coordinator continue to do the scheduling. On non-union projects, booking is handled with the actors directly. If it is a union project and children are being recorded, a welfare worker or teacher must be

hired to attend the session. It is this person's job to manage how the children are treated and to be available to help them with any necessary schoolwork. Upon scheduling the talent for union projects, the person responsible for handling bookings must contact the union to check that the actor is in good standing (meaning that all union fees are paid). On SAG projects, this process is called "station 12." When an actor is not cleared, he or she is not allowed to work. It is up to the producer to contact the actor's agent and straighten out the problem before the recording session. If the actor works without being cleared, the producer will be fined.

Prior to the rehearsal and recording session, the actor should receive the following materials far enough in advance to allow him or her time to prepare. This advance delivery may not always be possible due to last-minute script changes, but it is something to aim for.

- **Recording script:** This script reflects the dialogue lines only. If possible, it is important to include any "wallas" (specials sounds such as grunts or heavy breathing) within the recording script to ensure that all vocalizations are recorded for the character.
- **Production script:** The final approved script which is inclusive of all descriptions, scene direction, and dialogue helps the actor better understand the context of his or her performance.
- **Paperwork:** Includes contracts; documents such as a SAG Information Sheet (if the project is union, SAG paperwork must be used and can be purchased through the union); I-9s; W-4s; a general information sheet listing date, time, location, and parking information; and the producer's, casting director's, and agent's telephone numbers in case of emergency.
- **Artwork:** Character designs and any other applicable reference, such as key locations in which the actor's scenes take place.
- **Story reel/animatic:** The story reel/animatic is included to show the actor where and how the action in the scene is staged, if recording from a storyboard.
- **Reference for the section being recorded:** When, for example, a new set of lines has been inserted and the animation for the earlier shots has been completed, the actors can benefit from seeing how their new lines will fit into the previous section. This inclusion is also helpful when the new lines need to play off other actors' previously recorded work.

Recording

Before the recording session, the person responsible for coordinating the session communicates to the facility the number of

actors attending and the recording booth setup requested (such as the number of microphones), as well as any other special needs. On the day of the recording session, extra sets of materials should be provided along with a sign-in sheet. This sheet is used to keep a record of the time spent by the actors in case overtime needs to be calculated. In most cases, it is best to get all of the contract paperwork filled out before the session starts.

There are two types of recordings: scratch (or temporary) dialogue and production dialogue. These sessions take place throughout the production. With a makeshift recording studio set up in the editorial department, scratch dialogue is typically recorded using staff members such as animators, the editorial team, and the directors. On features, this type of voice track is generated when a storyboard sequence is initially approved and ready for the reel. The editor cuts the temporary dialogue with the digitized story sketches to create a story reel. The purpose of this track is to experiment with the story, dialogue, and timing before finalizing any of it. This method helps keep recording costs to a minimum until the sequence is approved. Once the sequence is approved, a production dialogue recording session can be scheduled to have the professional actors read the lines. Keeping track of temporary dialogue, production dialogue, and the subsequent revisions can be an enormously demanding task and one that the producer delegates to the editorial APM/PDM or a recording/script coordinator, who works closely with the editor or assistant editor to organize the production's needs.

As a rule, on projects with higher budgets such as features, the star talent is recorded individually and may be called upon to read new lines or revised lines as many as four to six times. An ongoing challenge for the producer is juggling the actor's availability, the production needs, and the budget. It is not uncommon for the director and producer to fly to another city where an actor may be working on location. If there are budget or time limitations, it is possible to digitally patch two recording studios together and record the performance long distance. It is always helpful to have the animation lead who will be animating the character that is being recorded present at the session. Watching the actor perform their lines can inspire the animator, and he or she in turn may be able to provide the actor with more insight into the character they are voicing.

A key factor to a successful recording session is clear direction. The voice director should be very familiar with the script and prepared with thoughts and notes prior to the session. The producer should also establish what scope of work is expected to be accomplished, who will be giving notes to the actors (directors, producers, supervising animators, and/or editors), and how communication of notes to the actors will be handled. This understanding can be important in keeping the recording session from spinning out of control and going into overtime. Although careful planning is

important, always keep in mind that you cannot predict what will take place and must therefore be flexible and prepared for anything.

In some cases, actors are filmed while they're in the recording booth. This footage is used as reference for the animators and possibly for promotional purposes. To avoid any misunderstandings, it is important that the talent is informed in advance through their agents that there will be video or photography shot while recording the voice tracks. This setup may predicate the additional paperwork or perhaps the need for a hair/makeup session to be attached to the recording session.

During the session, the recording engineer records the lines. An assistant engineer or a production staff member such as the recording/script coordinator or editorial APM/PDM tracks the lines recorded and marks the circle takes or the preferred performances. On some projects, these takes are edited together and returned to the production. There are two ways to edit the initial track. The first is called "normal pause," whereby four frames are placed equally between each line of dialogue. The other system is called "natural pause editing." In this system, the natural breaks are kept between lines, and if lines are overlapped, they are left that way. Audio files of the session are typically distributed to the director, producer, and the buyer/executive for review. On features, all digital files are sent to the editorial department with clear demarcations as to the select takes as well as any chosen alternate lines; from these, the editor builds the story reel under the guidance of the director.

Storyboarding

It is every filmmaker's goal to come up with an innovative way of telling his or her story. In animation, it all begins with the storyboard. After all, it is the first time the words are taken from the script and translated into images. The storyboard artist's job is to draw panels that illustrate scenes depicting the characters, their action, and their environment. At this stage of the game, there is a full range of possibilities open to the director—he or she is starting with a blank slate.

Allotting adequate time for storyboarding is key to success. By ensuring that enough time is provided for this step, the producer gives the director and the artists the opportunity to nail down the story and improve it as much as possible. The more time spent on fixing script problems in this stage, the better. In fact, in an ideal world, production does not start until the majority—if not all—of the boarding is completed and approved. Because the storyboarding phase is the last comparatively inexpensive portion of production, it is one of the best places to allocate resources to avoid potential problems down the line. If, for example, the story is not

entertaining or the logic has holes in it, this is the time to fix such issues. In these cases, production should be halted, if possible, or at least slowed down so that writing issues can be addressed before spending further monies. Unfortunately, many shows get into situations in which the deadline to start production and/or the lack of funds forces this phase to be rushed. The result is that story issues left unresolved at this point haunt the entire production. To quote a veteran storyboard artist, "Somehow there is never enough time to do it right, but there is always time to do it over."

Getting Started

Before the director can hand out an assignment to the storyboard artist, the following items must be in order:

- The script
- The voice track (if applicable at this stage; typical for television)
- Character models
- Environment designs
- Prop designs
- Office space and supplies, ranging from digital tablets (if the artist works in-house) to a secure FTP site for artists who work remotely
- Standardized page and panel setups
- Sample completed storyboard panels illustrating the show's style and complexity level (if applicable)
- Secure online file sharing, production tracking, and archiving system (for more details see Chapter 11, "Tracking Production")

On features, the director initially divides the script into sequences to hand out to artists. Through the storyboarding process, each sequence is further broken down into shots that become the individual units that go through the production pipeline and are then assembled to make the final project. The location where the action takes place and the time of day are typically the factors that the director uses to delineate a sequence. On a 22-minute show, for example, it is common to have two artists working for six weeks. Due to time and money limitations, once the artist gets guidance from the director, he or she focuses effort on making the story work and doesn't take many departures from the script. It is essential for television storyboard artists to have access to the voice track in order to start their assignment. The recording of the entire episode is edited into a radio play that the board artists use in order to enact the performance by the voice-over talent. Closely following how the lines of dialogue have been delivered, they add poses, facial expressions, and gestures that become acting guidelines for the production team. On these types of shows, storyboard artists also take on the role of editors and cinematographers. Based

on their understanding of the director's vision, they determine how the show should be cut by the way they depict the scene, asking such questions as, "Can the action be covered in a single master shot or are there many cuts?" They also create the template for the look of the project via how they choose to set up camera angles and how the characters are framed and composed within the shot.

The primary goal for the storyboard artist is, simply put, to tell the story. In long format, the script often plays second fiddle to the storyboard. Instead of the script being closely followed, it provides a frame of reference that the artist can use and improve upon. On an 85-minute project, the storyboarding staff can have anywhere between nine to eighteen months to complete their task. There will be ongoing changes throughout production as feedback is provided from buyers, test screenings, and so on; however, the lion's share of work is complete at this stage. Often when there is only a treatment or a description of a particular event, the storyboard artist is given the material in order to explore a theme and come up with possible paths to be followed by the script. As the feature storyboards evolve, the script is revised to match the latest set of boards. (See Chapter 5, "The Development Process," for more information on the relationship between feature storyboarding and the script.)

Depending on how a production is set up, both features and television productions can have a head of story (or story supervisor) who functions as a liaison between the director and the artists. He or she attends editorial sessions and must provide a keen sense of the director's vision and lays a foundation for communicating revision needs to the story team. The head of story also manages the workflow through his or her department with the aid of an APM/PDM or a coordinator. On feature productions, the story goes through many variations; it is the role of the story APM/PDM to keep track of the creative notes. The head of story and APM/PDM jointly meet with their crew on a weekly basis to discuss the overall status of the script and talk about the work in progress. Using the tracking system as the production hub, it is critical that the APM/PDM keep the notes current and make that information available to the crew as expeditiously as possible.

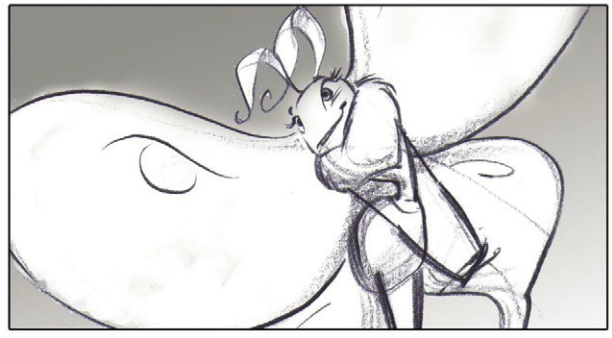
When a sequence is ready for storyboarding, the director and/or head of story assigns it to the appropriate board artist (depending on the project, this might be someone who works well with drawing action adventure or someone who has a knack for timing and illustrating comedy). Another approach is to have a group of artists work together on the same sequence. The artists are each assigned a story beat to work out. After artists finish their sections, they are pitched to the group for comments. Their panels are either approved for viewing by the director or sent back for revisions.

Because the storyboarding procedure is the cornerstone of any production, it is vital to establish a few ground rules.

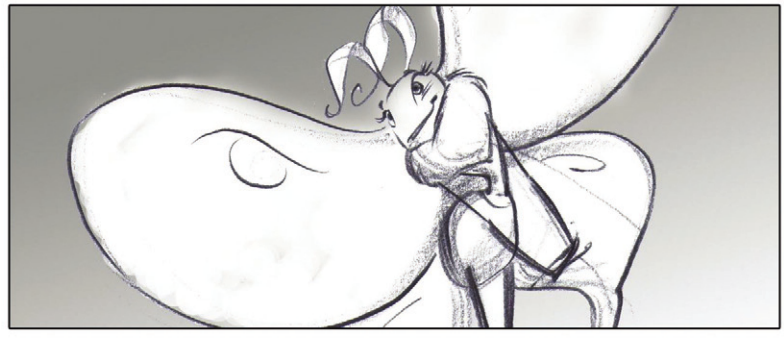
It should be noted that before starting storyboarding, the size of the panels must be standardized. The ratio used for high-definition television series is 1.77:1. For direct-to-DVD projects that are intended for limited theatrical release and for feature films, the standard ratio is 1.85:1. For projects that opt to use a widescreen format, the ratio is 2.39:1. These ratios are captured in Figure 8-20.



1.77:1



1.85:1



2.39:1

Figure 8-20 Aspect ratio comparison.

For television projects, sample storyboard pages should be created so that all artists use the same setup. It is common to have three panels per page and to allocate space underneath each panel for dialogue and action. When a storyboard artist uses software set up for storyboarding on a digital tablet, the template is already set up to accommodate this information. On series productions, it is advisable to distribute an approved storyboard sample to the artists as a tool to express a consistency of style for the show and to standardize the amount of detail expected on each panel. The model storyboard also has other benefits. One important advantage is for the artist to be able to gauge his or her assignment in correlation with its due date. The sample storyboard enables everyone to see the final goal and to have realistic expectations of the show's requirements.

The Three Stages of Storyboarding

Over the years, this three-step system has proven both cost-effective and highly conducive to good storytelling. However, not all productions can afford the time necessary for the board to go through all the phases listed in the following sections. As noted earlier, it should be emphasized that the more time spent honing the story at this stage, the better the foundation for the production.

Thumbnails

The creation of "thumbnail" size images is a quick way for an artist to map out his or her sequence, as shown in Figure 8-21. A *thumbnail* is a form of shorthand drawing that has numerous benefits. One benefit is that artists can make sure they are in sync with the director. Because the images are so small, the artist is able to fit many panels on one page, thereby enabling the director to see how the action flows in one fluid look. It is an early opportunity for the director to see whether what he or she had envisioned actually works. Because the drawing of thumbnails is relatively quick, the director may ask the artist to come up with a few different approaches. By requesting alternative drawings, the director takes advantage of the storyboard artist's expertise and may potentially come upon a version that works even better than what he or she had in mind.

Rough Pass

After the director views the thumbnails, changes are usually made to the drawings that may involve new character placement and camera angles. The next version of storyboards that is created while implementing these changes is referred to as the *rough pass* (Figure 8-22). The panels used for the rough pass are

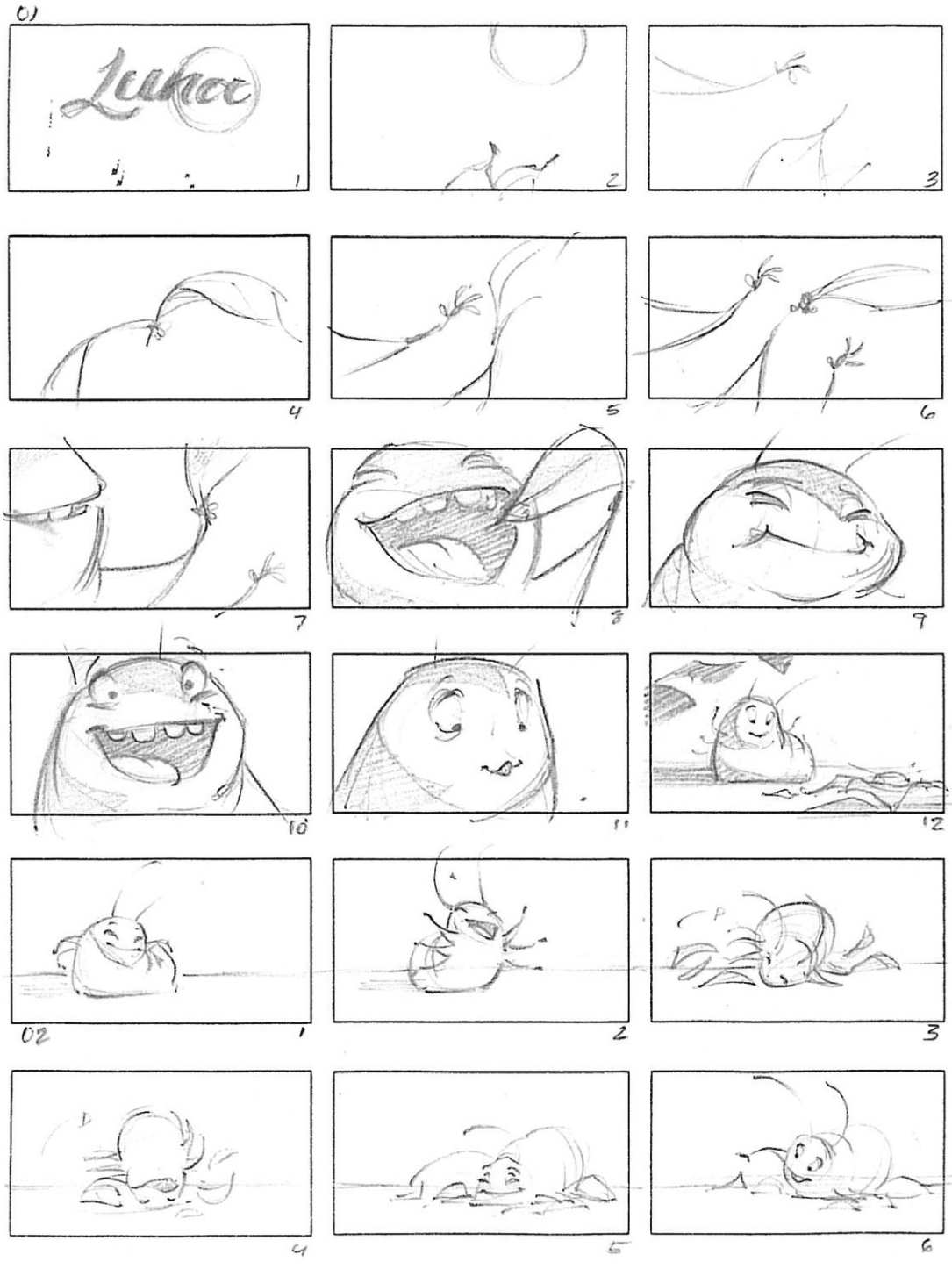


Figure 8-21 Thumbnail storyboards.



Figure 8-22 Rough storyboards.

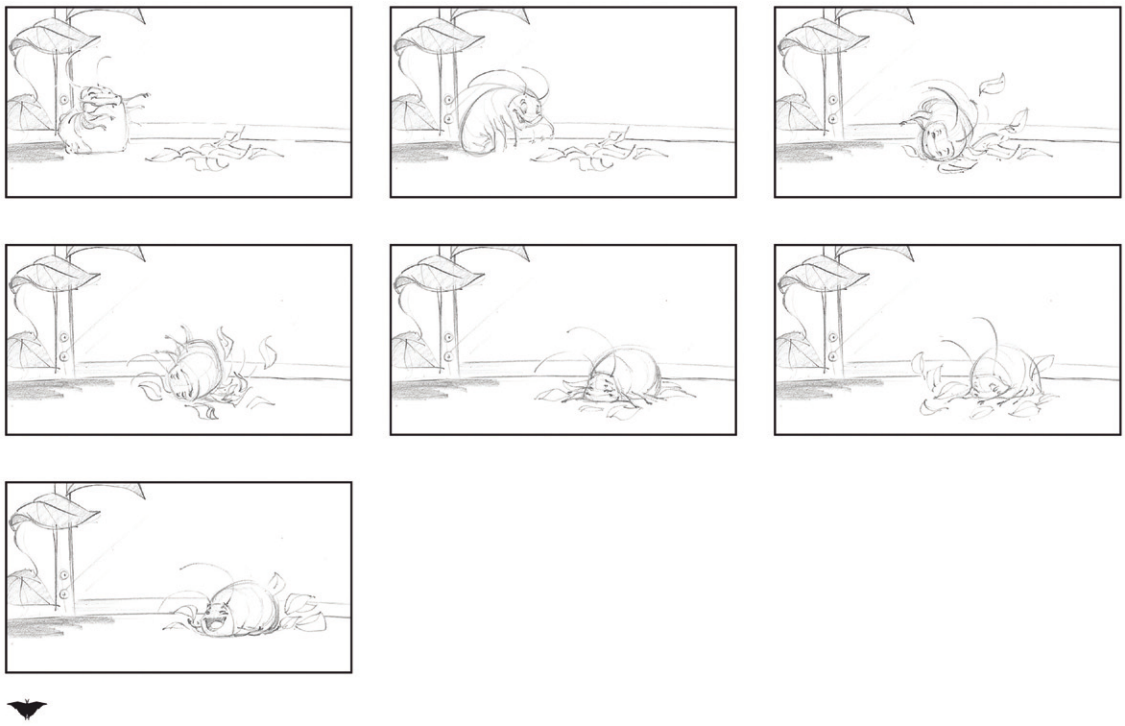


Figure 8-22 (Continued).

substantially larger than the thumbnails, enabling the artists to flesh out more details of the characters, their action, and their environment. This version of the board is much easier to read for the non-artist. The characters are more "on model" and the backgrounds are easier to decipher. Artists that use digital tablets can access the voice-over recording and can line up their artwork to the respective audio files.

On television projects, once the storyboard is approved at this stage, it is sufficient to be sent directly to the editorial department (via digital files or scanned files) to create the initial story reel. Story reels of the rough pass go to the producer and the buyer/executive for notes. At this checkpoint, the storyboards are often revised to serve creative notes. These changes typically require deletion of some panels and drawing of new ones. Once the revisions are completed, the board is ready for the cleanup phase. The cleaned-up version of the board is also reviewed by the legal department for any potential concerns, such as trademark infringements or copyrighted material that requires clearance. Additionally, the storyboard is checked as to whether it adheres to *broadcast standards and practices*. Broadcast standards and practices (BS&P) monitor the storyboard for any items

that deviate from television regulations, such as showing passengers in a car who are not wearing seatbelts.

On feature projects, the artist uses the rough pass of the board to pitch the sequence to the director, the producer, the writer, and sometimes the buyer/executive. Storyboard artists who work remotely and are not able to do an in-person pitch can create their own digital pitch complete with their voice (if there's no scratch recording), sound effects, and music using software that enables them to record the content on their screen and save it as a QuickTime movie that can then be sent as an email. After the board has been pitched, story notes are generated and the artist incorporates them into the next pass on the sequence. Because revisions require additional passes, both the budget and the schedule should be taken into consideration in terms of time allotment for storyboard fixes. If there are no changes (which is rarely the case!) the storyboard is ready to move to the next phase: cleanup.

Depending on the story, schedule, budget, and process, a CG project may skip the cleanup phase outlined next and move directly into pre-vis phase. In such a case, the director handpicks select panels for cleanup to depict the emotion of the story clearly. (See the upcoming section "Pre-visualization.")

Although some studios do not involve the producer until the storyboard has been completed through the cleanup stage, it is advantageous for the producer to be included before too many weeks have been spent on boarding a sequence. Since the producer is viewing the sequence for the first time, he or she can act as a test audience for the director and the artist. During the storyboard pitch, it can be immediately apparent to "fresh eyes" what areas read well and what sections may require additional work. The producer views and offers feedback based on the following objectives:

- Does the story structure work?
- Do we care about the characters?
- Will it fulfill the buyer/executive's expectations?
- How complex is the sequence? Are there ways to tell the same story with simpler shots without compromising the director's vision?
- If this sequence requires revisions or a complete overhaul, how will this affect the budget and the schedule?

Cleanup Storyboard

In this last stage, the panels are fully rendered to spell out all the necessary details of the shots as presented in Figure 8-23. This stage is important on shows that are sent to subcontracting studios because in some cases, particularly in lower-budget digital



Figure 8-23 Cleanup storyboards.

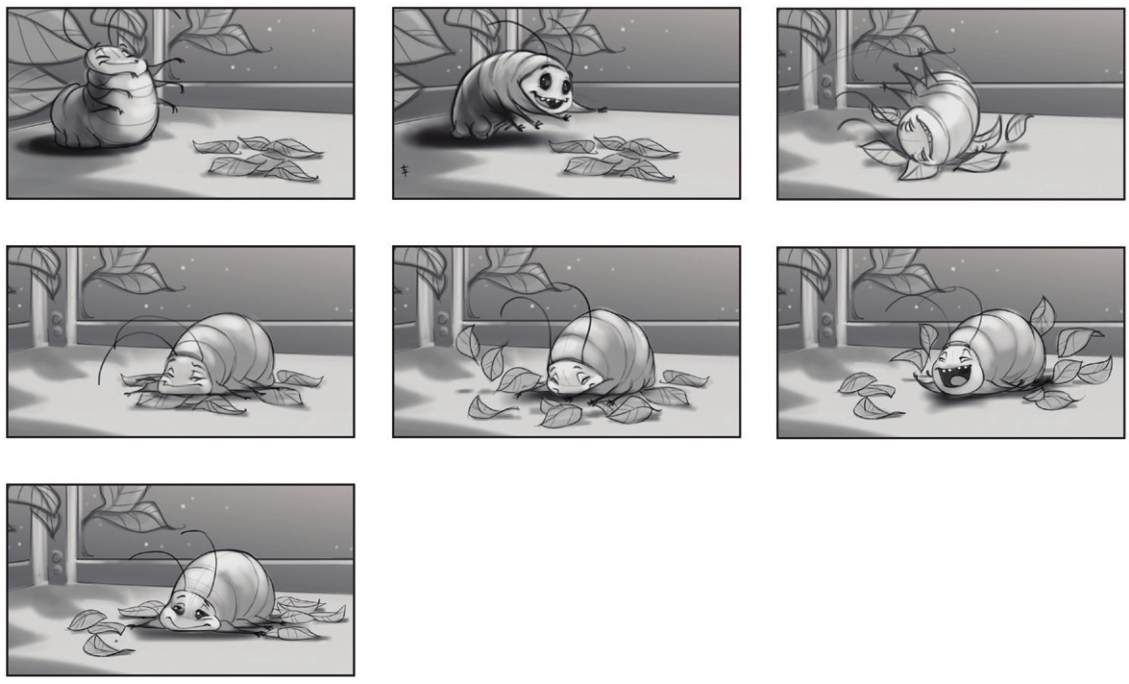


Figure 8-23 (Continued).

2D shows, the storyboard panels are substituted for layouts. If this is the case, the cleaner the storyboards in terms of staging, composition, and camera directions, the more likely you are to be happy with the work you get back from the subcontracting studio.

On television productions, it is often customary to have a cleanup or revisionist storyboard artist complete this version of the board. Since the original storyboard artist has already pinned down all the necessary story information, it is cheaper to hire a cleanup artist to do the final detail work. Meanwhile, the original storyboard artist is freed up to work on another episode. By working on boards that have been drawn up to this stage, the cleanup artist learns the thinking process and drawing skills necessary for boarding. In time, they are able to take on assignments as full-fledged storyboard artists. This method of schooling or mentoring within the studio is common and ultimately helps the producer build a strong team.

The storyboards for television series function as the blueprint for the production team and therefore must include specific details in order to facilitate their efficient integration into the production pipeline. These details include matching the dialogue with the panel(s), the studio name, the project title, the production number, the episode number, the page number, and the

name of the artist(s). This information is necessary to keep the boards organized and to help the production team and especially the subcontracting studio track the artwork and know whom they should contact if questions arise.

On features, at some studios, when the sequence is ready for a final pass, the story APM/PDM sets up a meeting for the key stakeholders, which can include the director, producer, head of story, the writer, and in some cases, the buyer/executive. At this meeting, the artist pitches the sequence to the selected staff members. After the artist has finished the pitch, if there are any additional notes, they are addressed, and once the sequence is approved, it is ready for turnover to the editorial department, where the story reel is built. Another way of working is for the cleanup boards to go directly into story reel/animatic and for reviews and notes to be given in this form.

During an editorial turnover pitch, the director or story artist that boarded the sequence pitches the sequence to the editor and editorial team. The editorial team takes note of the action and the pacing of the sequence, along with any other directorial notes on how this sequence should be cut, such as camera moves, dissolves, and so on. Other key crewmembers that should attend editorial turnovers include the art director, the visual effects supervisor, and the production manager, for an early look at what needs to flow through the production pipeline. Before handing them off to editorial, the images need to be properly labeled with the artist's name, chronological sequence, and panel numbers.

On projects that use subcontracting studios, once the storyboard is final and cleaned up, the director reviews it again and adds any necessary directorial notes as annotations on the animatic files prior to shipping. These notes include any information with regards to acting, staging, and so on. A designated production person also goes through the storyboards to check for new designs. Often the storyboard artists create new characters, locations, or props as dictated by the script. Depending on how much detail is missing from the new design on the storyboard, it may require its own model sheets.

It is also very useful to create a color board for the subcontracting studio's reference. The purpose of the color board is to function as an art direction guideline, showing the time of the day or the shot's emotional intent, for example. In some cases, depending how detailed it is, this version of the storyboard can even be used instead of creating color or lighting keys. Once the board has been signed off by the director, it is sent to the continuity checker along with all the other materials for review and production set up.

Building the Story Reel/Animatic

The most popular method of timing in animation is through the creation of what is called a *story reel*, also referred to as an *animatic*. The digital process of timing storyboards for an animatic begins with approved storyboard panels, either clean or rough, which are uploaded into the editing system. The audio track is also brought into the system, whether it is scratch vocals or final voice recordings. The track is then assembled and placed under the appropriate storyboard panels. By combining these two elements, the editor starts building the animatic by moving around the dialogue and timing out the action. If the editorial work causes significant timing or action changes the storyboard artist will need to generate new drawings.

The animatic functions as the blueprint for the project. The director has the opportunity to focus on the timing and the pacing of the shots with both the picture and the dialogue track. If the storyboard is not working, the director can delete and/or add new panels. He or she can also easily check for hookup problems. For projects that are outsourced, the animatic is key in closing the gap between the two production studios, as it clearly lays out what the director is planning for the show. Much of the success of animation is dependent on how it's timed. Because many of the artists working on the show do not necessarily speak English, the animatic allows them to see and hear how each shot is cut and paced and ultimately, how it works as a whole.

For projects animated in-house, the animatic is a living record of the show, which is always in a state of flux. Each shot goes through a metamorphosis as it progresses down the production pipeline. Starting as storyboard panels, the shot's first transformation takes place when it is sent through pre-vis and/or animation. As more and more shots are animated, the project begins to come to life when still frames are replaced by animation. It is important to note that sound also plays a large part in the development of the animatic. It is common to build a sound effects and music temp track alongside the creation of the animatic in order to help facilitate the telling of the story by underscoring key moments in addition to developing the overall sound direction for the project. The temp track is a necessary device for sound designers, composers, and dialogue editors because it functions as their guideline during post-production. (See Chapter 10, "Post-production," for more details on the soundtrack.)

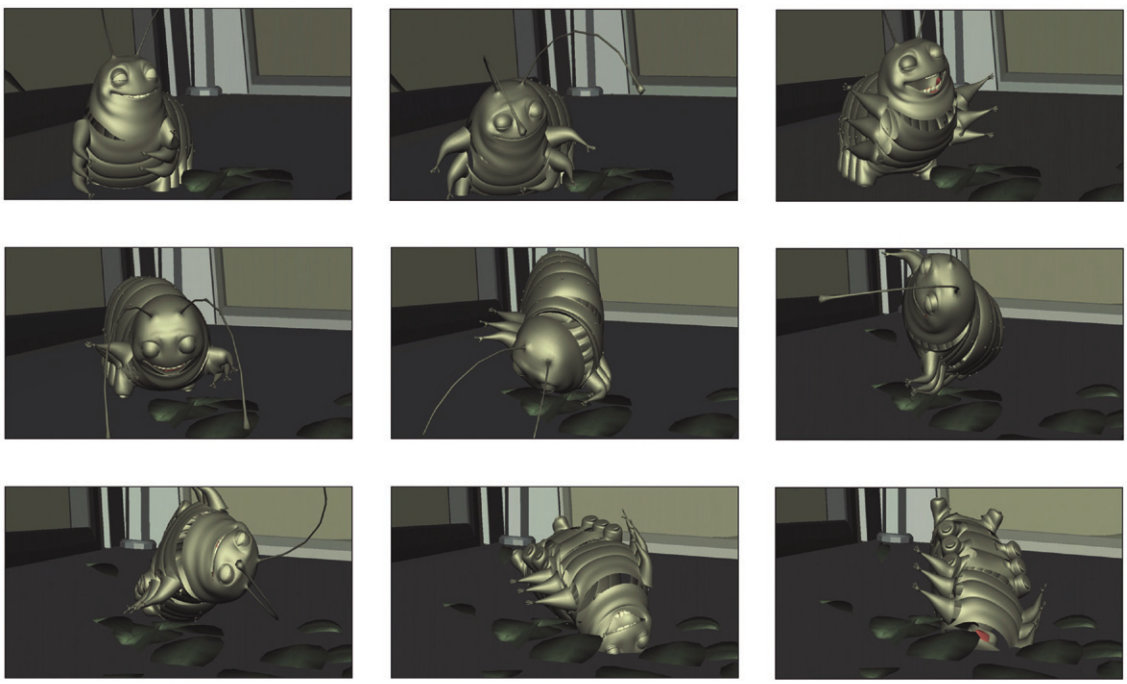
Pre-Visualization

After the rough storyboard has been signed off on, the process of pre-visualization can begin on CG projects. Pre-vis is the

stage at which the 2D drawings are used as guidelines to create and explore the 3D space in a CG world. This process should be considered the next step in the storytelling phase as opposed to a technical phase, as it enables the pre-vis artists and directors to take advantage of the actual space within which the characters are "acting." Pre-visualization provides much more creative flexibility when it comes to the use of the camera. It is also a very effective step from a production standpoint in that it enables the team to identify what assets actually need to be produced when camera placement is determined early on. See Figure 8-24 for an example of pre-vis panels from *Luna*.

The process generally uses *proxy models*, or low-resolution, simplified versions of geometry for the characters, sets, and props (if applicable). A pre-vis artist might create these elements or be provided with them by a proxy modeler. The director will do a handoff to discuss the intent of the sequence or shot. The artist will then place the characters accordingly on the set, with limited movement (i.e., sliding a character across a room versus animating his or her steps) and setting cameras to tell the story

Figure 8-24 Pre-visualization for *Luna*.



as creatively and cohesively as possible. Acting as cinematographers, it is important that the director check in with the pre-vis team on a regular basis to ensure that the project is aligned with his or her vision.

Pre-visualization is particularly helpful when trying to conceptualize complicated camerawork. Action-packed fight or chase sequences can be enhanced with dynamic staging and camera work that can be worked out in this relatively inexpensive step. Pre-vis artists will often take this step to the next level, using cinematic tools such as lighting and even temporary effects to enhance the storytelling process.

The challenge at this stage is that most proxy models do not have the ability to portray any emotion. Artists therefore need to keep this in mind when staging sequences, knowing that the story needs to be told in a way that enables the viewer to take a leap of faith in regard to the emotional intent. In some cases, it may be possible to sketch faces over the top of the proxy models so that any key information as to what a character is thinking is clarified, especially if it is a critical moment.

If the project is due to be released in a stereoscopic (3D) medium, the story animatic and the pre-vis phases are key opportunities to identify shots that can maximize the "3D experience" for the audience. Pre-vis is also a good stage to start watching that the action does not break the frame line in what are intended to be big "reaching out" moments, because out-of-screen elements need to remain free of the frame line at all times within such shots. (For more insight into utilizing the stereoscopic medium, see the sidebar "Stereoscopic Filmmaking at 20,000 Feet" in Chapter 9.)

In 2D pipelines, a less flexible version of this step takes place in the first phase of production in what is known as the *rough layout* process.

Executive Screenings

During pre-production is when the buyer/executive can experience how the words in the script have been transformed into visuals and how the project is shaping up before animation is started. Although the animatic has many advantages, it can create a danger zone for the producer if the buyer/executive reviewing it is not made aware of its purpose and the nature of animation timing. Looking at an animatic when it is made up of storyboard panels or pre-visualized shots, especially in a rough form, can be very misleading for a viewer who is not familiar with the animation process. As previously noted, each shot is shown on the animatic for the estimated length of time that it will require for its

animation, but for an individual who is not aware of this fact, the animatic can be—for lack of a better word—boring. However, the addition of camera movements and temp sound track can be very beneficial in fleshing out the intent of the action in the shots.

Slugging/Animation Timing

After any necessary revisions are addressed on the animatic—meaning that panels are rearranged, deleted, or added, and dialogue is shifted, deleted, or replaced—some production pipelines (particularly 2D shows) call for "slugging" the updated story panels. The slugging process documents for the animators the timing that is used in the final animatic. The origins for the term "slugging" date back to the days when old-fashioned printers were used for typesetting. The space between the words was described as a "slug." In animation, the pause created on the soundtrack to accommodate the action is called a "slug."

The animation timer paces the timing of a shot in order to create the desired effect. Before the onset of digital technology, a stopwatch was the sole method used to estimate the length of a shot. The animation timer would start the watch and act out the action drawn on the board, either just imagining it or actually moving around to determine the timing of the shot. The amount of time that elapsed between the start and finish of the action was accounted for and calculated into feet and frames or seconds and frames. The animation timer would then put the timing or the slug below the appropriate storyboard panel in order to guide the next steps of the process, layout, and animation.

Editing programs in which animatics are built inherently provide timing information. With that said, this timing may not always be fully accurate and will therefore need the expertise of an animation timer. For example, a character's walk cycle may take longer in animation than was estimated in the storyboard panels. Another issue to keep in mind is whether the shot will have to be opened up to account for stereoscopic requirements. For example, the eye typically needs more time to adjust and the brain more time to read stereoscopic shots than traditional cutting often provides.

Upon completion of this conforming process, the director reviews the board with the animation timer to add other key directorial information, such as camera moves, effects information, or key dramatic points to emphasize on a particular character. Concurrently, the editor outputs the dialogue track for a track reader to use in processing the next step of pre-production: the drafting of exposure sheets. If a subcontracting studio is involved, a continuity checker should cross-reference this information with other materials being shipped to be sure that all elements are consistent and included in the package.

Exposure Sheets

In some pipelines, when the timing of an episode or a sequence is completed, *exposure sheets* or *dope sheets* are produced. These documents operate as the map for what is going to happen in each shot and include frame-by-frame descriptions of every detail of the story. The following information is provided by exposure sheets:

- The shot number and timing
- Shot description
- The name of the animator
- The act number or sequence number
- The sheet number
- A description of action
- The dialogue column
- Mouth chart information (if applicable)
- Columns for levels of art
- A description of visual effects
- Camera notes
- The production number

Figure 8-25 shows a sample exposure sheet. There are several aspects to the production of an exposure sheet. Initially, the producer has blank exposure sheets printed with the name of the project and any key information (such as the production number) that should be repeated on each page. Depending on the size of the project, thousands of sheets may be required. Next, the sheets and the dialogue track are handed to a track reader.

Track reading is the process of phonetically transposing the entire dialogue track frame-by-frame onto the exposure sheets. Listening to the dialogue track, the track reader places the words for all speaking characters into their correct frame on the exposure sheet. Each row on the exposure sheet represents a single frame, with typically 80 frames per page. After the number of feet and frames or seconds and frames are delineated, the exposure sheets for the sequence or episode can then be separated so that individual shots can independently move down the production line. The completed exposure sheet provides the animator with a framework as to where the shot starts and stops and what is its duration in correlation with the dialogue. (For more information on this topic, see Chapter 9, "Production.") When animating to music, the beats on the click track are transposed onto the exposure sheet so that the animator can time the animation to the beat. (See description later in this chapter.)

On productions that are outsourced, exposure sheets are sent to the animation timer (also referred to as the sheet timer) for detailed direction. The animation timer, with guidance from the director, notes what will need to take place in the shot. Using the storyboard along with the audio track as a reference, they

PROD.	SEQ.	SCENCE		SHEET

ACTION	DIAL	EXTRA	4	3	2	1	EXTRA	CAMERA INSTRUCTIONS



CARTOON COLOUR COMPANY INC. 9024 Lindblade St. Culver City, Calif., 90230 Phone (310) 838-8467

Figure 8-25 Sample exposure sheet (Courtesy of Cartoon Colour Company).

further define and clarify what action needs to be animated by the subcontracting studio. Other information is included, such as camera movements and special effects, when applicable. Fine-tuning the details written on the slugged storyboard, the animation timer is now able to write out the acting notes next to the actual frames. The timer can plus the sheets with drawings that illustrate and pose out action or emotions, or he or she may use actual panels taken from the storyboard.

For CG shows, paper-based exposure sheets may not be used. The directorial information included in the exposure sheet is instead made available in a digital format as part of the animation file. These notes are typically a direct reflection of shots in the story reel/animatic or the pre-vis reel. Whatever the method used, it is crucial at this stage to not take any piece of information or direction for granted. The more details that are spelled out, the higher the chances are of the show fulfilling its artistic goals. For example, on a traditional 2D show, if there is wind effect in the shot, the animation timer must make certain that every character or object that comes into contact with the wind is animated appropriately. Until the wind stops or there is a cut from an exterior shot to an interior shot, the wind effect must be exposed on the sheets. Every nuance added will greatly enhance the final product. The animation direction therefore also covers such detailed information as how the characters articulate words and move their body parts down to the smallest details, such as eye blinks.

Because it is not always possible for the director to hand out the show and explain the timing in person, it is important that an experienced animation timer produce the sheets. Because exposure sheets are often the sole means of communication the director has with the animators on the project, the information must be concise, clear, and legible; otherwise, the show will more than likely require numerous retakes.

As mentioned previously, a mouth chart for all key characters is added to the model pack when working with non-English-speaking animators. The purpose of the mouth chart is to show how the character's mouth looks pronouncing different sounds. The applicable mouths are symbolized by letters and are noted on the exposure sheet next to the dialogue. This frame-by-frame direction by the animation timer enables the artist in the subcontracting studio to follow the director's vision even though they are thousands of miles and often an entire language apart. Comedy or a comic moment for example, is something that can get lost in the translation. This system helps the artists fulfill the project's objectives.

On a number of digital 2D television productions, although it is well-established that the final delivery of the show is to be 11 or 22 minutes, the timing of the shots may be purposefully not

exact, thereby allowing the animator more flexibility. In this setup, no exposure sheets are generated to accompany the episode. The storyboards are used instead of layout panels and character animation is drafted directly over the storyboard panel. The dialogue track and the temp sound effects provide a reference for action, but the final length of each shot is determined by the animator.

Preparing a Shipment: Checking and Route Sheets

All materials must be checked before they are shipped or placed on an FTP site for the subcontracting studio. Ideally, the director is very involved, reviewing all content including the final board before sending the show to the animation house. The storyboard must be conformed to the final approved animatic before shipment to the subcontractor. The continuity checker reviews the production elements for any missing materials or information. He or she cross-checks the model pack(s), the animatic, the dialogue tracks, and the exposure sheets (when applicable) in order to make sure that everything is clearly laid out and easy to understand. If elements are missing or artwork requires revision, the continuity checker works with the director to rectify the problem before the shipment can take place.

In the process of putting the shipment together, the checker fills out a *route sheet* so that both the domestic studio and the subcontracting studio have a detailed record of the material sent and the individuals responsible for the content. The following information is noted on a route sheet:

- The studio name
- The production title
- The episode number/sequence number
- The names of the director, color stylist, and continuity checker
- A breakdown of shot numbers, shot footage/timing, shot description, time of day, and effects information

Upon the completion of these steps, the material is ready for the subcontracting studio. (For a list of items necessary for a shipment, see Chapter 7, "The Production Team.")

Songs

Pre-production is the stage at which song sequences must be established, as a great deal of work involving many entities needs to happen over the course of a show. There are both creative and commercial reasons why the inclusion of songs can greatly

enhance a project. To some, the combination of animation and music is almost a higher art form. Additionally, many attribute the global success of animation to its use of songs—the combination of the two can transcend language and cultural barriers. Songs can also play a key part in moving the narrative of a project forward, especially when they are cohesively intertwined with the story. Frequently, a song is used as a device to cover the passage of time. Another purpose is the revelation of important information as to characters' motivations, such as their wish to win back their true love or to take over the world.

From a commercial perspective, songs add another dimension to the marketability of a project. If popular performers are cast to write the project's songs and/or sing them, the soundtrack is bound to result in additional revenues. At the same time, an audience that may not be interested in seeing an animated project may reconsider their position when they learn that their favorite artist has participated in its creation. There have also been a few projects on which the film itself has had a fairly short run in the theaters, but the soundtrack has continued to have a life of its own.

Songs should first be discussed when the script is in early development. Right from the start, it is necessary to establish how many songs will be needed, where they will be placed, and what genre(s) of music will best suit the project. Questions to answer include: *Will there be a gamut of different types of songs, such as ballads, showstoppers, or anthems? What will be the purpose of each song?* Because the production of songs can be very costly, it is crucial that all key players share the same vision, particularly how the artistic requirements correlate to the budget and the schedule. Once all of these issues are decided, the producer and/or music executive at the studio can start making contacts with agents representing songwriters and composers. On some productions, music supervisors may be hired on a freelance basis to play this role. Using their contacts, they pursue well-known artists to create a commercially viable soundtrack. As noted before, involving musical celebrities almost guarantees the project a certain amount of media attention, and it can be inspiring to the artists working on the production as well. If the budget does not allow for a big-name performer, the producer or the music supervisor asks for demo reels from agents in order to identify and cast the appropriate talent for the project. The next step is to make a final selection. As soon as the musical talent is chosen, and it has been established that they are interested in the project, the process of negotiations begins. (For more information on how contracts are negotiated, see Chapter 4, "The Core Team.")

Upon completion of the contractual discussions, the director, the producer, the songwriter, and the composer start working

together. Clarity of vision is essential at this stage. The more the songwriter and the composer are made aware of what specific goals are to be accomplished by the songs, the better. It is also important to inform them of production requirements and make sure that they have all the material needed in order to meet all deadlines, including executive and legal reviews.

Ideally, the songs are the first sequences of the project to be readied for production. There are a number of reasons for prioritizing these sequences. Externally, songs can be used as sales and advertising tools by ancillary groups such as marketing and publicity. Internally, sequences with songs can require more artistic effort than non-musical sequences. An example is a dance number for which it may be necessary to hire a choreographer and set up a live action shoot to film the dancers for reference. Because production can't get started on these shots until the video reference has been completed, it is important to focus on this type of sequence as early as possible. Often, the director may want to have a lead animator and crew animate an entire song sequence. Under these circumstances, the song needs to be recorded as soon as possible so that the artists can work on the shots without creating a production bottleneck. In terms of complexity, typical song sequences require fairly elaborate artwork. Unless these shots are given ample time in production, there may be too many creative compromises.

From the production standpoint, a positive aspect to song sequences is that timing can't be altered because the seconds and frames for each shot is tied to the music. The fact that the timing is solid potentially allows the sequence to go through the pipeline at a quicker pace. The drawback to song sequences is that depending on the way they hook up with each other, animators may not be able to work on an assigned shot until the shot before it has been animated. Furthermore, the necessity of hookups can diminish the number of shots that can be worked on simultaneously.

In order to get the production started on song sequences, as soon as they are approved, a click track and temp music are recorded. The *click track* is a timing device. It is a recording of the beat to which the animation is matched. This beat is transposed onto the exposure sheets for animation. In post-production, the digital file of this recording is provided for the conductor, sound effects designer, and the voice talent for reference. While listening to the recording, they are able to match their work to the film. The *temp music*, as referenced by the name, is a piece of recording that is used as a substitute until the final music is composed and recorded. After the click track and the temp music have been completed, the director is able to lock the sequence for production.

The series of steps necessary for song production start with selecting and casting the vocal talent. After they have been recorded using the click track, the next stage is to spot the music to the locked picture. This stage of the process requires the producer and the director to discuss the project's final musical and orchestration arrangement with the composer. The composer then writes the music and records it under the producer's and the director's supervision. The last stage for song production is the final mix in which the music recording is combined with the picture in order to deliver the completed show. (See Chapter 10, "Post-production," for more information on this topic.)

Title Sequence and End Credits

For television shows, a separate title sequence is produced and is placed at the front of each episode. The purpose of the title sequence is to introduce the content of the show and the main characters, and—most important—to entice the viewer into watching the program. The title sequence should therefore be considered a marketing tool used to promote the series. For this reason, most producers typically spend a significant amount of money on it in order to make sure that it successfully fulfills its mission.

The title sequence goes through the same production steps as a television show, albeit on a much smaller scale. Depending on the buyer/executive's requirements, a title sequence can range in length from 30 to 60 seconds. Once a concept has been selected, a storyboard is created and reviewed. When it is signed off on, the title sequence continues through the pre-production process. If dialogue is needed, a recording session is held. To save money, it may be recorded as a part of a recording session for one of the episodes.

For the producer, the production of the title sequence presents a unique opportunity to test out a new studio. Subcontracting studios are always eager to prove their abilities on the title sequence in the hopes of obtaining future contracts. In comparison to risking a whole series at a very low cost, producers can evaluate what quality of animation the studio is capable of creating and check out how business is handled.

If your budget is tight, another option is to make the title sequence a part of the overall deal. In many cases, a subcontracting studio may be willing to do the title sequence at minimal charge in order to win the contract.

In a perfect world, the title sequence should be completed through post-production prior to the actual episodes reaching this stage. Taking the title sequence through post-production

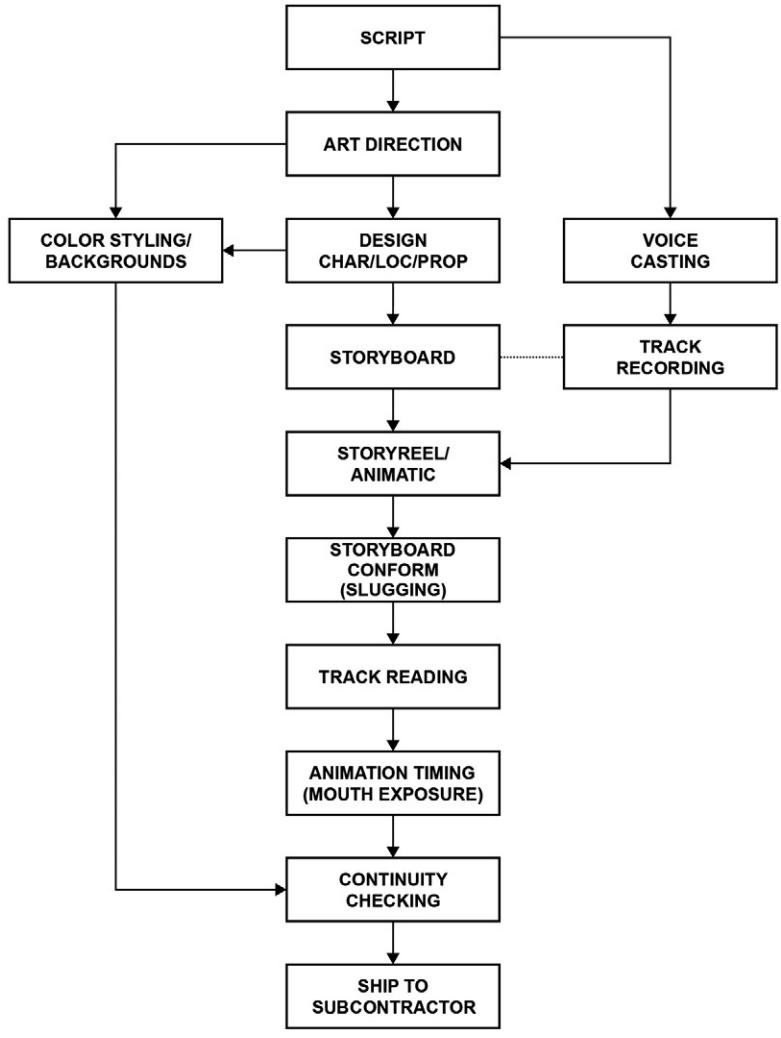


Figure 8-26 Pre-production process: traditional 2D television production.

is another great opportunity for the producer to select the right team. It tests out the various facilities and identifies any potential problems before the bulk of the work begins to flow. It is also a chance to decide on the music and sound direction of the series and explore a variety of options. Once the title sequence is finalized, it is added to the element reel. (See Chapter 10, "Post-production," for further details on this topic.)

Figure 8-26 shows the basic steps for pre-production on a traditional 2D television series.

9

PRODUCTION

The Role of the Producer During the Production Phase

Production is the stage of the process in which the producer's multitasking skills are truly tested. The producer is the glue that holds everything together. He or she has to work a significant number of hours in order to successfully juggle the many responsibilities. On most projects, when production ramps up, portions of the show are still in pre-production. The producer needs to be on top of all steps from a budgetary, creative, and technical standpoint in addition to taking care of all of the project's external needs, such as marketing and consumer products.

The following is the list of elements that should be completed in pre-production that are integral to starting the production phase:

- Character and prop designs, also known as model sheets
- Environmental/location designs
- Finalized art direction
- Final assets with completed test animation (CG)
- Textured and surfaced environments (CG)
- Look development (CG)*
- Color-styled, symbolized, and rigged asset library (digital 2D)
- Voice track*
- Storyboards*
- Pre-visualization reel (CG) or story reel/animatic (traditional 2D and digital 2D)*
- Timing information/exposure sheets*

In television series or lower budget projects, all of these elements are considered locked at the start of production. On features, all items marked with an asterisk (*) are considered works-in-progress with sequences moving forward into the production pipeline as the necessary assets and storyboards are approved. Once sequences have been through story reel/animatic and/or pre-visualization and shots have been prepared for production, each one proceeds through the pipeline at a different pace and is often altered in order to enhance the storytelling. Due

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to these revisions, the story reel and voice track are rarely final until the picture is locked and readied for post-production.

Having already created a workable budget, running a production efficiently has a few principal requirements. First, a production-ready script is needed. Equally as important is an established visual development and animation style. In order to support the creative vision for the show, a production pipeline must be fully tested and prepared for shot creation. The team must be recruited, trained, and ready to start. Next, two significant items have to be balanced: fulfilling the project's aesthetic goals and meeting the weekly quotas. Once enough work is in the pipeline, the pressure of hitting the targeted quota is what drives the production. Unless the inventory is available for the artists, there is no possible way to build the necessary momentum. A steady workflow allows the producer to ensure that the creative requirements of the project are met. Ample inventory is therefore key to leading the project in the right direction. Additionally, time needs to be set aside or compensated for in a gradually increasing quota schedule to allow artists to ramp up and learn the project's specific stylistic requirements.

For the majority of television series and subcontracted projects, once pre-production elements are completed, the project is outsourced for the production phase (as previously discussed in Chapter 8, "Pre-production"). After an episode or sequence is sent to its assigned studio, the producer takes on a macro role in terms of managing the elements. The producer or one of the members of the production team (such as the production manager) is typically the point person for the subcontractor (that is, the person from whom the subcontractor can request further materials, clarification, or information). The producer receives a weekly production report from the subcontractor in order to monitor the project's status. If the producer is concerned with the show's progress, it is his or her responsibility to communicate to the subcontractor or the overseas supervisor. (See Chapter 7, "The Production Team," for more information on this process.) It is generally not the producer's job to solve the day-to-day problems unless the delivery of the show is threatened. At this stage, it is the subcontractor's responsibility to meet the project's delivery dates at the agreed-upon level of quality. During production, the producer also continues to oversee the various other episodes/sequences being pre-produced, usually at the pace of one a week or one every other week pending the show's budget and timeline.

On features, the producer relies on the associate producer and the production manager to handle the actual day-to-day details of the production (facilitating the workflow, managing the inventory, tracking shots, meeting quotas, and so on). The feature producer's areas of focus typically involve:

- Story development
- Production design and art direction

- Voice talent and recording
- Music
- Budget and schedule adherence
- Overall status of production
- Buyer/executive notes and communication
- Ancillary and marketing groups

A feature producer's job is divided between the internal realm of the production itself and the external factors that can help facilitate the project's success once it has been released. Frequently, the two areas overlap, as in the case of selecting voice talent when a celebrity's voice track is needed both as a production element and as a promotional tool. Internally, the producer must make sure that the project is fulfilling its creative goals, from the script and story reel/animatic to production design and art direction. Once the project is set up in terms of its visuals and story content, his or her internal involvement is usually more limited. In general, the producer attends key production meetings such as brain trusts, turnovers (when a sequence is handed out in a department), and sweatbox sessions (all explained later in this chapter) to view the project's progress and give creative input when necessary. On a day-to-day basis, the producer continues to oversee the progression of the show both creatively and fiscally while dealing more and more with external factors, interfacing with ancillary groups and setting up ways to promote and market the project in preparation for its release. (For more information on the topic of the producer's role in relation to the crew, see Chapter 7, "The Production Team.")

Buyer's Creative Checkpoints

Externally, the producer should be in constant communication with the buyer/executive. The typical creative checkpoints for the buyer/executive are at the following stages:

- The script
- Character and key location design (and model builds, if applicable)
- Color-styled/textured character and location designs
- Story reel/animatic (on a per-sequence basis and/or once the entire project is on reels)
- Pre-visualization reel (if applicable)
- Voice talent selection
- Music composer selection
- Lyricist selection (if applicable)
- Vocalist selection (if applicable)
- Promotional material (if not created by buyer's entities)
- Credits
- The final output

Ancillary Groups

The producer works closely with the ancillary groups, including consumer products, marketing, publicity, and promotions. Both the producer's and the director's input and support are needed for marketing materials, such as art for posters or footage for the trailer, teaser, and viral campaigns. With the publicity and marketing budgets for theatrical features often nearly matching the production costs, the producer should work closely with key executives in these groups to help them create strategies and campaigns to best sell the finished project. It is vital to keep these groups updated on new artwork and completed shots. To this end, the project's secure, cross-platform, web-based production tracking system should be set up to provide the ancillary groups with content that can be used for marketing, publicity and merchandising. (See Chapter 11, "Production Tracking," for more details.). The producer is also involved in analyzing and implementing the results of market research and test screenings for the project. The feedback received can play a significant role in how a project is shaped in order for it to attract and entertain the target audience.

It is not uncommon for the project's character designs and color treatment, for example, to be influenced by the needs of consumer products. If this is the case, the producer will have to bridge the gap between the director's creative objectives and the consumer product's commercial goals. Chances are that the director's last priority is marketing or the toy line. Yet it is up to the producer to find a means to have art and commerce coexist and ensure that requests by the ancillary groups are promptly addressed.

Production Processes and Procedures

As the producer juggles all the external factors relating to the project, the production team gets ready for the marathon ahead. Critical in preparation for the production process is an in-depth review of the show's creative requirements vis-à-vis available resources, namely time and money. As early as the scripting stage, it is important to create a detailed list of all assets needed, their specific complexities and total count. On digital 2D productions, an asset library is created concurrently with storyboard approval and the assemblage of the animatic. It includes all character builds to be used in addition to props and effects designs (if applicable). On a CG or a traditional 2D project, this detailed investigation begins after the completion of the pre-vis/animatic phase. On CG projects, the building of low-resolution proxies of characters and environments featured in the script should commence as soon as there are approved

designs during pre-production, although the final asset list will not be realized until the pre-vis pass has been completed (sequence by sequence or reel by reel). Environments shouldn't be overbuilt since it is more efficient to see what is in-frame after layout or shot setup has been completed and add detail to the sets to suit the needs as defined by camera and preliminary lighting. Once sequences are approved for production, the team can analyze each individual shot's content and collaborate on how to fulfill its artistic objectives. The exact production phase when this type of review takes place may be different from studio to studio, but the overall goal remains the same: how to best use the production resources to facilitate optimal shot production.

Editorial

Before launching into production, it is important to understand the role of the editorial department. It serves as the hub of the production because this is where the film comes together in many key phases. When a sequence is approved as a story reel/animatic or, in pre-vis, the editorial department starts the official production launch by creating the *draft*. The draft is a documentation of each shot in the approved sequence including its description, timing, dialogue information, assets needed, and director's notes (if applicable). The actual tracking of production is set in gear by the data in the draft.

During production, the story reel/animatic constantly evolves, and shot by shot, it gets updated by editorial cutting in work by shot setup, layout, rough animation, and so on down the pipeline until the entire film has been through all steps. At planned checkpoints during production, editorial will have screenings of sections of the work-in-progress film. As the project gets underway, this department will also run *sweatbox sessions* at which the film is evaluated from both aesthetic and technical points of view by all key production and artistic supervisors. In between such group viewings of the project, the director and editor review the same sequences repeatedly and make edits that result in timing changes, deletion of shots, and/or creation of new ones.

There are a number of reasons why changes are made. The primary reason is that the edit will make the film better. Script revisions and storyboard changes dictate the majority of story reel/animatic changes. On occasion, an animator may discover that the timing required for a particular character's movement needs to be altered. In other instances, a decision may be made to recast a voice talent, and the new recording will more than likely require new timing and revised animation. When there are changes in the duration of the shot at any stage of production, it

must be returned to the editorial department so that the shot's timing information can be fixed accordingly. It is important for the producer to have direct communication with the editorial staff in order to be kept abreast of all changes requested by the director. Editorial decisions can be critical to the pacing of a sequence and the overall improvement of the film. Furthermore, the producer must agree to all such changes. Change means money and time that may not be accounted for in the budget. It is therefore up to the producer to determine how the project will fare as a whole both creatively and fiscally when revisions are requested after a sequence has already been launched and shots have progressed down the production pipeline.

Complexity Analysis

Before officially entering the production stream, a feature film sequence has to undergo a rigorous evaluation to assess the exact requirements for each shot on a per-department basis. In fact, as noted in the pre-production discussion, this form of review starts during the design phase, as it will greatly affect the budget. Similarly, a television show that has been set up to be outsourced has a similar evaluation process during the storyboarding phase to ensure that the project is produced within the agreed-upon production capacity established with the subcontractor. In either case, it is during this *complexity analysis* that the project's creative goals and fiscal challenges must be balanced. Depending on the production structure and the expertise level of the team members, the individuals who are typically responsible for managing the complexity level of a feature are the associate producer and visual effects supervisor. Their job is to set the budgetary parameters for each sequence in the context of the entire project. Also providing input for this analysis are the production manager and the stereoscopic supervisor (if applicable). Additionally, all production leads participate in this meeting in order to have a thorough understanding of the project's creative needs while also exploring ways to synchronize their efforts. Together, the team discusses the director's intent, reviews available options, and determines how to best use their resources to achieve the desired artistic goals. Once the complexity pass has been completed, the next step is referred to as the brain trust meeting. Pending how the production is set up, this phase may be called bluebook or workbook review. It may even take place at a later stage of production after shot setup or completion of layout, in which case it is referred to as layout turnover. Regardless of the name, this is the time to put as much thought as possible into analyzing every shot's requirements so that all the artists who follow can put their efforts towards creating rather than struggling with technical issues.

Brain Trust

It is during the brain trust meeting that the director pitches his or her vision for the entire sequence shot-by-shot. Depending on whether the project is CG or 2D, participants for the brain trust typically include the director, the producer, the associate producer, the visual effects supervisor, the art director, the production manager, all department leads, the stereoscopic supervisor (if applicable), and various CG supervisors or technical directors that serve as pipeline experts, should questions about capabilities arise.

During this meeting, each shot in the sequence is individually reviewed and rated per department and assigned a *bid* (estimated level of difficulty and/or time and manpower) for the expected workload by the department lead. All information pertaining to each shot—including its required assets, the director's notes, and the departmental bids—are then entered on the production tracking system. This type of detailed shot breakdown is a necessary step for both the creative team and the management crew. For example, on a CG project, this early analysis would directly affect the layout department in determining how extensively a set should be built and whether a matte painting will suffice instead, which would translate to immediate time and money savings on the production of the shot.

At the same time, when the production team has accurate tallies of the character, prop, and location counts and the amount of effects required, they can generate realistic weekly quotas that closely match the project. As they get a handle on the number of high-complexity shots, they can pace the production so it is geared toward meeting a specific "difficult shots" quota number and avoid a bottleneck at the end. This early assessment of each shot allows the creative and management teams to have a strong grasp of the sequence's needs and focus resources accordingly. The visual effects supervisor plays a vital role in the brain trust meeting; it is his or her role to simplify the shots and save production resources without compromising story content or creative objectives.

After the brain trust review is complete, the editorial department issues the shots in order for production to get started. To begin this process, the editorial department generates timing information and the track reading for the shot. The shot details are also entered into a production database for tracking purposes. The names of all artists and staff members working on the shot as it progresses through the pipeline will be logged into this tracking system as well, noted along with when the work was received, completed, and approved by the director. (See Chapter 11, "Production Tracking," for more information.)

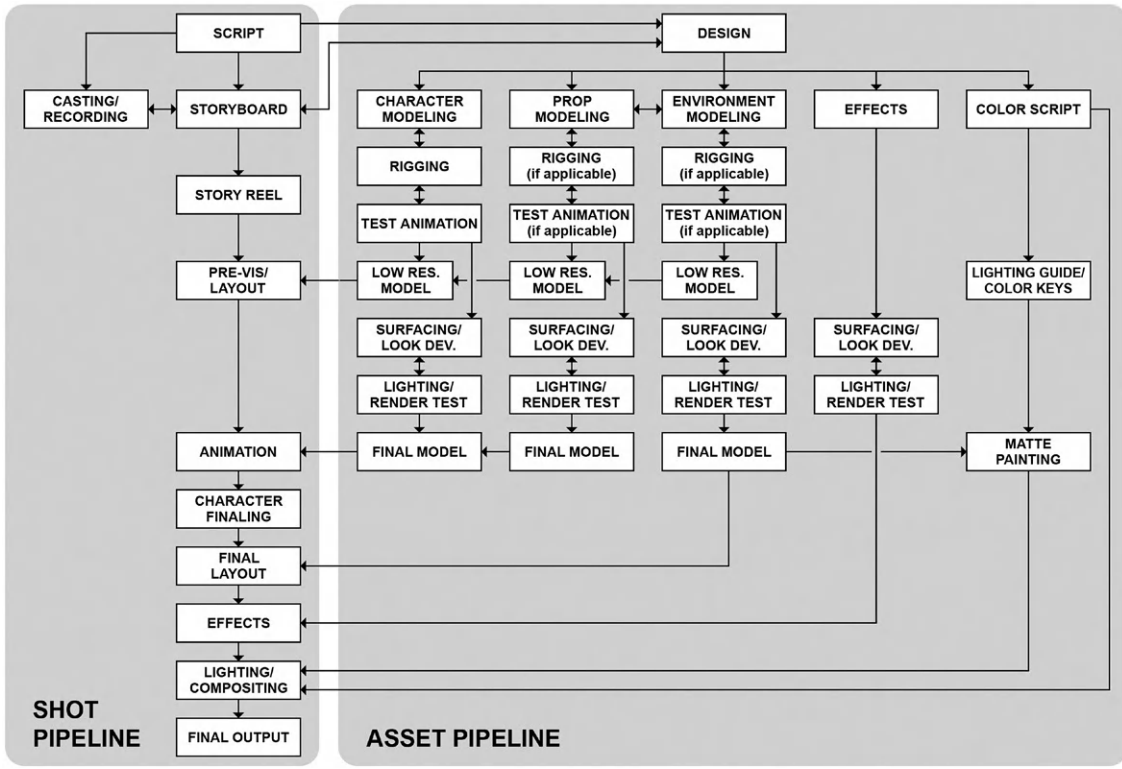


Figure 9-1 CG production pipeline.

CG Production

The following sections detail the basic production steps involved in producing a CG animated feature project as presented in Figure 9-1. Once look development has been determined, the main assets (characters, locations, and props) have been produced and tested during pre-production, and sequences have been approved through pre-vis (see Chapter 8, "Pre-production," for more details), the CG crew can fire up the production pipeline and begin shot production. Although this is rarely the case, the ideal scenario on feature projects is to allow the shots to enter the production pipeline in the context of their respective sequence, so that they are created, evaluated, and approved in continuity whenever possible in every department, with the emphasis being on approving a sequence at a time rather than a shot at time. Pipelines may vary from studio to studio

and among software packages, but the basic CG production steps are as follows:

- Layout/Shot setup
- Animation
- Character finaling
- Final layout/set dressing
- Effects
- Matte painting
- Lighting and compositing

Layout/Shot Setup

In layout, where the shot first enters the production stream, its timing, composition, staging, camera setups and lighting are established. The layout stage may also be referred to as *shot setup* or *shot preparation* and depending on the studio's nomenclature, layout artists can be referred to as *cinematographers*.

During this step, the following elements and directives are placed in each shot:

- Rough model of the set (viewable in 360 degrees, if applicable)
- Low-resolution character placement, showing broad action, posture, and interactions
- Low-resolution props
- Character continuity and screen direction
- Real-time depiction of the characters' actions against the background in relation to camera(s)
- Camera position, angle, movement, and lens choice
- Preliminary effects and lighting

The layout step paves a smooth production path for a project by solving potential problems from the very beginning of the production phase. It is also the stage for identifying possible reuses of sets and or combining of shots. It enables the director to determine the audience's eye placement and to avoid rendering unnecessary artwork. The animators' work follows layout's direction for character positioning and action on the set. By placing preliminary visual effects in the shot, artists can see what specific elements are needed (such as dust, water, or rain) and how greatly their timing and presence will affect the shot. Preliminary lighting also informs all downstream artists of how their work will appear—whether in spotlight, saturated light, moonlight, or daylight—which can be extremely helpful to the efforts of character animation in particular.

Some pipelines may opt to establish cinematography and timing during the pre-visualization step in pre-production. In this case, the shot setup step serves as a more technical phase of the process, during which proxy models are swapped out for final models and the shot is prepared to enter production. Such model

swapping also encompasses some of the work later described in the section "Final Layout/Set Dressing." This variation in how the tasks of layout may be organized is an example of the many ways to simplify or separate the work in a production pipeline generally driven by staffing, resources, and budget allowances.

If not already handled in pre-visualization, layout is also the department in which stereoscopic considerations must be addressed in order to efficiently produce an effective 3D experience for the audience. A *depth script* may be drafted to allow the production to chart the use of stereo, outlining the information on where to set the point of convergence and the overall feel for stereo throughout the film. Some shots require that an altered version be generated in order to maximize the stereoscopic effect; others can accommodate the cinematic needs by utilizing the exact same version of the shot and adjusting the depth during compositing.

At this stage, the shots are forwarded to editorial and the pre-vis reel is replaced with the updated layout or shot setup files while the timing is adjusted as necessary. After the director has signed off on the sequence, the shots are ready for animation.

Animation

It is during the animation phase that the heart of the story begins to beat. The animator (or the actor, in live action terms) brings the characters to life and creates their performance. During animation handout, the director and or animation director goes through the entire sequence with the animation supervisor and lead. He or she describes the intent for each shot individually and the performance requirements in continuity for the sequence. Under the guidance of the animation lead, the animator plans out the character's action using the timing and dialogue as indicated. Here the animator manipulates the rigs to pose out the character model in key frames. By depicting the character in acting beats, he or she blocks the action and enables the animation lead to review the shot from the performance standpoint. At this juncture, the animation is purposefully posed out in broad strokes so the action can easily be changed and alternate acting choices can be explored if necessary. After the shot has been approved for key animation and blocking, it is placed in the sequence, allowing the director to review how the performance is working from shot to shot in an animation department dailies session.

Once approved for key animation and blocking, the shot is ready for rough animation. This is where the animator begins to flesh out the animation and nuance the performance. He or she adds in facial expressions. While listening to the dialogue, the animator

Stereoscopic Filmmaking at 20,000 Feet

Bonnie Arnold, Producer, DreamWorks Animation

One of the advantages of animation over live action filmmaking is greater control over the elements of production, from lighting to locations to weather conditions and everything in between. This control is especially valuable with regard to camera placement and its effect in the creation of a stereoscopic film.

Because animation cameras are not limited by physical space, we can create shots in stereo that are physically impossible in a live action environment. The result is a live action experience in a fantasy environment. When we were working on *How to Train Your Dragon*, the layout team took great liberties with camera placement—their subject matter was fire-breathing, fast-flying dragons. With a clear vision provided by the directors, the goal of the flying shots was to accentuate the character's point of view and give the audience the feeling of being on a flying dragon at 20,000 feet in the air! These shots and all other stereo moments would not have been successful without preplanning by our cinematography team.

On *How to Train Your Dragon*, the production of a stereoscopic film was our mandate from the very start. Our layout supervisor proposed a stereo philosophy for the film based on supporting the film's story arc, which was discussed and approved by the directors. Our visual effects supervisor, layout supervisor, and stereoscopic supervisor then executed that plan and adjusted it based on story changes and resources. They made this process feel seamless, interpreting the directors' vision as an enjoyable interactive experience for the audience.

Advanced planning and a stereo philosophy were not only necessary in creating the big action sequences, but also invaluable when we were crafting the more emotional moments. The sequence where the movie's hero, Hiccup, searches the forest and first discovers the injured dragon, Toothless, is a good example. This sequence was meant to create suspense and put the audience in Hiccup's point of view so they could experience the range of Hiccup's emotions as he struggles with what to do about Toothless. To achieve this effect, the level of stereo was adjusted to accentuate Hiccup's thought process throughout the sequence.

I can't emphasize enough how important it is when producing a stereoscopic film to establish a basis in the story for use of the tool and, of course, to keep in mind your technical and budgetary parameters. The real success of stereo in *How to Train Your Dragon* was due to the fact that the storytelling, the locations, and the characters lent themselves to great and exciting stereo cinematography. That made all our jobs easier.



Figure 9-2 *How to Train Your Dragon* ("How to Train Your Dragon"™ and © 2010 DreamWorks Animation LLC, used with permission of DreamWorks Animation LLC).

determines where the phonemes fall and adjusts the character's lip movements accordingly to achieve lip sync. The character's performance is finessed further as the animator adds in secondary animation. Secondary animation is the motion that would be a natural follow up to the character's action such as body parts jiggling as he or she rides a horse, for example. After the animation is approved in a sweatbox session with all department heads present, it is sent to editorial to be cut into the reel and prepared for the subsequent department(s) in the pipeline which, depending on the requirements of the shot, could be either the character effects department or final layout.

Sweatbox

The origin for the term sweatbox is said to date back to when Walt Disney would view the scenes completed through rough animation with his animators and critique their work. Some attribute the term to the fact that the screenings took place in a small, crowded screening room where it got hot; others believe that the animators would actually sweat in anticipation of how Disney might react to their work. Either way, the same wording is used today when a shot is prepared by editorial to be reviewed jointly by the director and other core team members. Sweatbox sessions are comparable to "rushes" in the realm of live action production.

Though the director and respective department heads have already seen and approved individual departments' work in dailies, it is during the sweatbox sessions that all existing levels are combined so that the reviewing group can see how the shot works as a whole. Generally present at a sweatbox session are the director, the producer, department supervisors, associate producer, production manager, and APMs/PDMs. During sweatbox, the director evaluates how the shot works in terms of acting, composition, and camera movements in continuity with other shots.

It is essential that everyone be up to date on any changes or retakes that are called during sweatbox. Often, a shot may require a fix and is therefore considered a retake. It is helpful for all in attendance to observe why shots are not approved and, when possible, to implement solutions that can keep retake work to a minimum. This is a very important meeting for producers to attend so that they can see firsthand the status of the shots in progress and be part of the decision-making process in approving shots. By attending sweatbox sessions—which are usually daily events once production gets rolling—the artistic leads are alerted to the type of shots that are coming their way. They can also take notes when special handling is necessary for a specific shot. At the same time,

if the director or producer has any questions on the shots being viewed, department supervisors are on hand to provide answers.

Character Finaling

The character finaling technical directors primarily focus on adjustments required to hair, fur, and cloth simulation issues. Their artistry is key to the believability of the character's performance as he or she moves, reacts, and interacts with the external world. For some shows, the character's hair or fur can be a crucial part of the character's performance. Both the hair and cloth simulation are driven directly from the character's movements, but the complexity of this cause and effect is compounded by the fact that simulation software is based in physical reality, though the character's performance is often not intended to be realistic.

At this phase, animation glitches are fixed by a character finaling technical director, addressing issues such as crashing geometry, inaccurate contact points, and skinning issues caused by complex animation: a shoulder rig breaking through clothing when a character gestures wildly with his arms, or feathers ruffling strangely as a character bends his wings are two examples. It should be noted that if enough time is spent in the rigging phase during pre-production, vigorously testing and adjusting rigs before animation begins, the demands on the character finaling team can be minimized.

Once the shot is approved through this step in a character finaling department dailies session, it is sent to editorial and made available for final layout.

Crowd Animation

On projects that have a need for large populations of background characters, a crowd animation department may be established. Typically separated from character animation, it tends to be a more technical style of animation versus a performance piece. Crowd animation adds to the production value of a project, but it is meant to dress a set more than anything: the models and their motion need to appear as if they belong in the same world as the main characters but should not distract from the focus of the shot.

Final Layout/Set Dressing

Final layout or, as some studios call it, *set dressing*, is the stage wherein the artists replace the low-resolution assets with their high-resolution versions in preparation for lighting. In close collaboration with the art director, this department dresses the set to camera while complementing the animation. They also manage any other

scene planning needs, such as finalizing the camerawork. Next, a sweatbox session gathers the director, the visual effects supervisor, the art director, and department supervisors to view the sequence in its entirety (to the extent possible). This is the opportunity for the director to finally see how the shot is coming together and to call out notes as needed, such as how to avoid tangents within the frame, or how a set may seem over-dressed and therefore distracting. Once again, the goal is to make sure that the focus for the shot is clear. It is the final layout artist's job to adjust the camera, do prop placement, and maintain shot continuity in order to best support the animation and storytelling. As mentioned in the section "Layout/Shot Setup," some of this work may be incorporated earlier in a production pipeline, depending on the division of labor.

Once all directorial notes are addressed, the shot is sent to editorial and made available to the effects department.

Effects

Effects artists are responsible for designing and generating all non-character-related animation, and their work is instrumental in establishing an atmosphere and creating a mood. Depending on how the production pipeline is set up, it is possible for the effects team to start creating rough effects as soon as the shot has been established in pre-visualization or layout. In fact, to maximize inventory in multiple departments, it is not uncommon for effects artists to work simultaneously on a shot with character animation in progress as well, if the effects and character animation are not interdependent.

The effects department is responsible for prop animation, which might range from moving vehicles to exploding buildings to wind-blown trees. Effects animators also control the motion and affect of natural elements such as dust, water, mist, fog, fire, and smoke. There are numerous types of effects animation—such as rigid-body dynamics used in destruction shots, particle renders used to create sparks, fluid simulation to create oceans and rivers, or volumetrics used in creating mist or smoke—and these may be created through a wide variety of software systems.

If the project is meant to be shown in a stereoscopic format, the effects artists must be mindful of creating their images with appropriate depth in mind. For example, if the effects artist applies his or her work onto flat surfaces, using what may be called a 2D cheat to add a layer of fire, attention to detail will be needed so that the element does not appear as a flat card onscreen. At the opposite end of the spectrum, some rendered effects may simply play too quickly or too intensely, causing the audience to get disoriented and confused. In whatever medium the effects animator works, his or her elements are usually

created in unison with the lighting department to ensure proper integration and look within the environment of the shot.

Once the shot is approved by the director, it is prepared for showing in a sweatbox session.

Matte Painting

Traditionally, matte paintings are utilized to fill environments more efficiently and inexpensively. This procedure involves painting textures on staged levels of cards or other simply modeled surfaces to give a depth effect without having to build the complete, complex geometry of a model. This method works well for elements of art that are meant to provide fill but not be the focus of a shot, such as distant sky or background mountains. As the art of digital matte painting has evolved, however, this department is more commonly utilized as a "fix-it team" that is called upon to create overlays to blend with CG sets in the foreground, to paint in additional set dressing, or even to add debris where necessary, as long as the camera is locked and it's a one-off shot. If the project is meant to be shown stereoscopically, however, it is important to provide enough 3D depth to matte painted surfaces to allow for parallax when the camera moves, preventing flat cards from actually appearing onscreen as flat cards floating on the screen. Even if the painted surface is a generally flat piece of geometry with a slight arc to it, that might be enough to stand up in stereoscopic projection.

Lighting and Compositing

Lighting and compositing, also called *shot finaling* on some productions, serve as the last stop on the production pipeline, establishing the time of day and a sense of drama while creating the final look for a shot. Color, shadows, brightness, contrast, the light source, and its direction are all delved into at this stage of production.

The lighting step is very similar to live-action production in that actual lights are set up to illuminate the environment; however, they are placed in the virtual world of the computer. The most basic of these so-called virtual lights are *the spotlight, point light, parallel light, area light*, and *volumetric light*. The spotlight emits a single beam of light in a singular direction, as would a lightbulb placed inside of a cylindrical lampshade. The point light produces omni-directional lighting as a bare lightbulb would. Parallel lights radiate an equal amount of light in the same direction, comparable to how sunlight functions. Area lights are used to create soft shadows, as would a 3-foot-long fluorescent lightbulb. Volumetrics are used to cast cones of light, much like a lightbulb placed inside a standard lampshade.

A key consideration is how light interacts with various surfaces and whether the light is reflected or diffused. The CG realm offers even greater flexibility and theatrical lighting options than is possible on a live action set. For example, if the shot works better without a shadow being cast by a lit character, it can easily be omitted. The light effects can also be stylized, if need be. Should the director want to see red and blue light in the same shot but not have them mix to create a purple hue (as would naturally happen on a live action set), such clear separation is attainable with CG lighting.

The process of establishing lighting options is initially informed by the color and lighting scripts and explored further during the pre-vis pass and then layout. (For more detailed discussion on the color and lighting scripts, see Chapter 8, "Pre-production.")

After the sequence has been completed through final layout, lighting keys are created using select shots and are approved by the director and art director. The sequence lighting launch takes place with the director, the visual effects supervisor, the art director, the lighting supervisor, and the lighting lead for the sequence. Once the sequence has been officially handed out, the team begins to use the lighting keys to propagate the rest of the shots: in some studios, these are referred to as *parent shots* and *children shots*.

Following the lead's set up of the lighting key or a parent shot, the lighter applies the appropriate lighting rig to the assigned shot and modifies it accordingly. The lighter then renders iterations of test frames as he or she adjusts light positions and intensities within the shot. When the lighting most closely matches the key, he or she separates the shot into different levels and renders them as layers. *Rendering* is the process through which all the digital work and coding is translated into visual images. At this point, all the elements including characters, effects, and environments are lit and rendered as individual layers. Next, they are set up for compositing so that all the layers are linked together, creating a fully integrated and cohesive shot.

Upon reviewing the final shot, the ideal scenario is to do as many corrections as possible using the compositing program as opposed to having to re-render. If the temperature of the lighting is not right, for example, it can be tweaked in compositing much more efficiently than it would be if the entire shot were to be relit.

At the same time, the benefit of compositing a shot using the individual layers is that it allows the lighter/compositor more control over the elements within the shot. For instance, if the

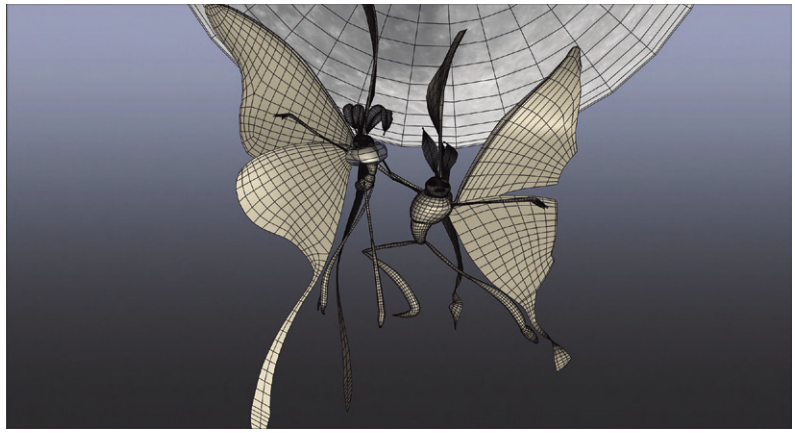
need arises for the shot to undergo an animation fix due to a dialogue change after it has already been lit, it is possible to simply import the new animation data and use the original lighting set up to re-render just the character level and composite the shot again, rather than having to re-render all elements, which is both costly and time-consuming.

Although lighters are able to do quite a bit to change the appearance and the "feel" of an object or an environment, it is important to note that they are working within the parameters set by the upstream departments. For instance, although a lighter can manipulate the specular characteristics of an object (such as reflection off of a smooth surface like a mirror) by increasing or decreasing a highlight, he or she can only accomplish it if a specular layer was built into the texture and then only within a range that was pre-set by the surfacing department. The same is especially true of lighting the effects animation and is frequently a source of consternation for both the lighters and the effects artists. The lighters cannot change the speed at which water flows, for instance, or how viscous it is. Once again, they can tweak only within the limitations of existing attributes, which may affect the look of the effect, but not its underlying mechanics. The desired result needs to be created through close and frequent collaboration between the effects and lighting departments and through extensive back-and-forth testing.

Though rendering and simple compositing occur throughout the production process to provide visual checks to work in progress (as would be the case in layout and preliminary lighting tests), these are generally done at a notably lower resolution than this final render. The more layers are added, such as texture and lighting, the longer it takes the render farm to process all the mathematical data and generate the image. However, when the final shot is ready for output, it is necessary to composite the shot in high resolution in order to see how the shot is going to look on the theatrical and/or television screen.

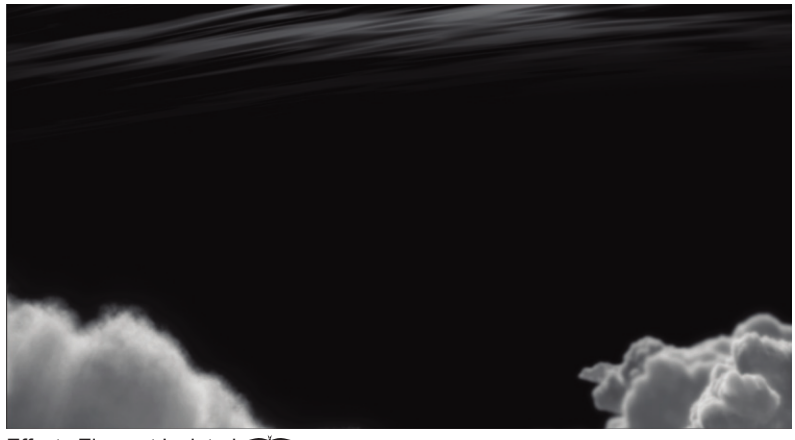
A separate rendering pass is required for stereoscopic output. Both left and right eye frame renders can happen simultaneously in the pipeline; these shots require double the amount of rendering, but not double the amount of work. The stereoscopic shots are viewed in a separate review session from the non-stereo shots. This pass must be approved by the stereoscopic supervisor, who will look for elements and artifacts that may not readily appear in need of fixes when viewed as standard frames.

Once the composited shots have been viewed by the director and approved as final, they are prepared for post-production.



Low Resolution Render of the Character Animation

Figure 9-3 Frame of CG animation work from *Luna*.



Effects Element Isolated

Figure 9-4 Frame of CG effects work from *Luna*.



High Resolution Render of the Character Lighting Pass

Figure 9-5 Frame of CG lighting work from *Luna*.



Figure 9-6 Frame of final composited CG image from *Luna*.



Figure 9-7

To see the progression of how Luna was created and view the completed short, visit www.rainmaker.com/luna.

2D Production

The term "2D animation" has different meanings to different people. It is no longer a single standardized production process but different animation techniques that are dependent on a combination of software programs and rely on digital technology. For

the purposes of clarity in this book, we have divided 2D animation into two main categories: *traditional 2D* and *digital 2D*. What distinguishes traditional 2D from digital 2D is the fact that in traditional 2D, the artist creates hand-drawn animation in selected departments such as layout, animation, cleanup animation, and effects. In digital 2D, the animation is primarily asset-based, using the character builds created during the pre-production phase.

Bringing the characters to life on a traditional 2D project involves the animator drawing the character or effects animation frame by frame. Depending on how the production is set up, it is possible for the artist to draw directly on a digital tablet (paperless process) or use paper and pencil (paper-based process) to create images that are scanned and integrated into the digital pipeline. In both paperless and paper-based pipelines, the line drawings go from rough to cleanup and are then submitted to the digital ink and paint process for color application.

In contrast, on a digital 2D production, typically the characters and props are color-styled and, depending on the software used, textured directly after the design has been approved. They are then broken apart into movable pieces similar to a cut-out paper puppet. Next these individual units are symbolized and rigged and become part of the show's asset library. In this scenario, the artist creates animation mainly through manipulation of these reusable assets. In comparison to traditional 2D, digital 2D can be more streamlined and faster-paced because it tends to utilizes stylistically limited animation. Both of these pipelines are examples of production processes that can be modified pending each project's specific artistic requirements and budgetary configuration.

Depending on the look desired for a project and its fiscal parameters, traditional 2D and digital 2D both have their pros and cons. Traditional 2D, which benefits from the option of full animation, is typically used for high-end-budget projects, including theatrical feature films. Digital 2D, on the other hand, is primarily used for TV projects with shorter timelines that are designed for a more limited style. How much a digital 2D project can rely solely on a fleshed-out library is determined by the choice of design and movement of the characters. From the producer's standpoint, it is important to note that these two techniques are frequently combined because they are mutually beneficial. The best production pipelines mix and match these methods based on the needs of a shot: for example, a traditional feature project can use digital 2D techniques to seamlessly and efficiently populate a shot in need of a crowd. Meanwhile, a digital 2D television show can utilize an artist who is traditionally trained to enhance the limited animation through adding in drawn poses.

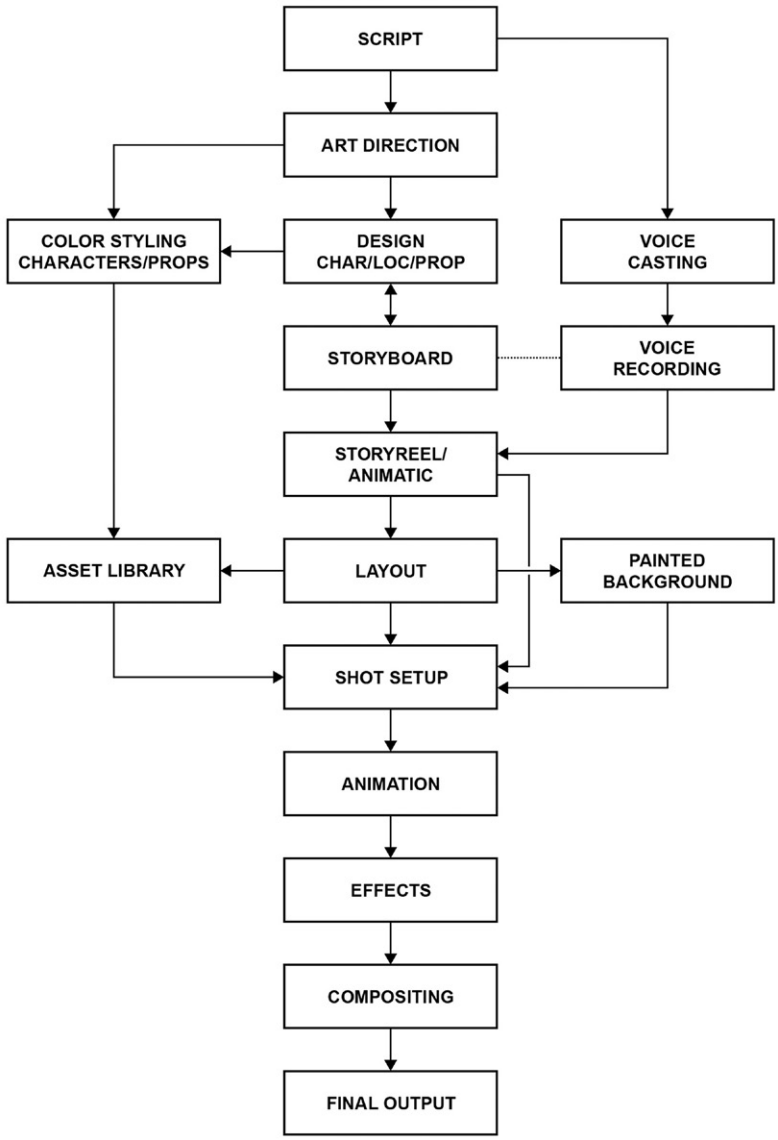


Figure 9-8 Digital 2D production pipeline.

The following list describes the key steps in traditional 2D and digital 2D productions, indicating the processes that they share along with areas that differentiate each from the other:

- Rough layout
- Scene planning (traditional 2D only)
- Shot setup (digital 2D only)
- Animation
- Cleanup layout (traditional 2D only)

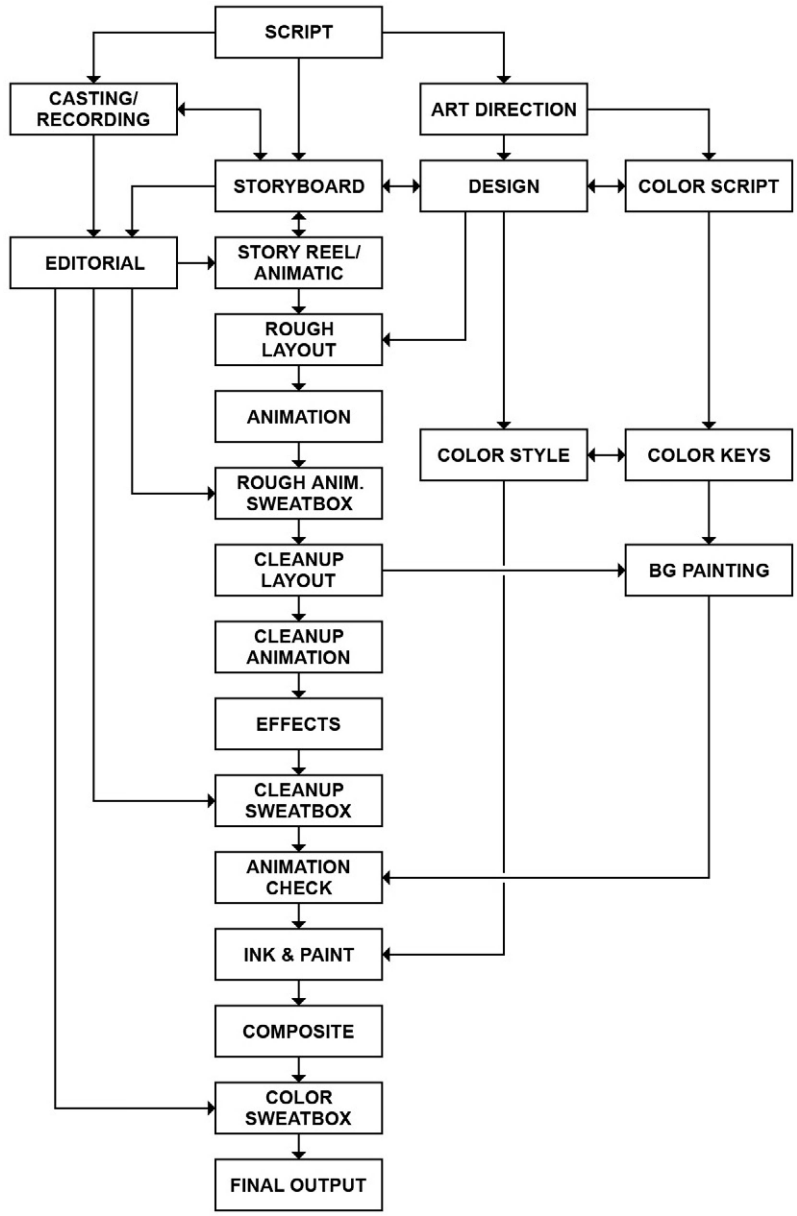


Figure 9-9 Traditional 2D production pipeline.

- Background painting
- Cleanup animation (traditional 2D only)
- Effects
- Animation check (traditional 2D only)
- Color styling
- Ink and paint (traditional 2D only)
- Compositing
- Final check

Refer to Figures 9-8 (digital 2D) and 9-9 (traditional 2D) for graphic representations of the production pipelines to be presented in this section.

Rough Layout

Whether it is for a traditional 2D or a digital 2D project, the primary objective for a layout artist is to stage the shot in the most effective way possible to facilitate the telling of the story. This is the department in which every shot's "camera" is set up for the animator's performance. The animatic is broken down into individual shots, which are assigned numbers, and planned out cinematically. In some production pipelines, there is a *workbook* phase which addresses shot placement, continuity, and camera mechanics. Either way, it is at this juncture that the reuse options must be determined for shots that share the same background. Creating a layout for a shot involves designing the location, indicating character poses and effects. The purpose of breaking down the elements within the shot is to allow the layout artist to define how the character(s), props and/or effects will interact with the surroundings. Following the instructions from the directors and the layout supervisor, the layout artist uses camera composition, angle, movement, light, and shadow to convey the intent and mood of the shot. It is also in the layout department that continuity issues and hookups between the shots must be addressed.

As shots are approved on a paper-based traditional 2D's rough layout department, they are forwarded to the scene planning department to be scanned in preparation for the animation phase. As layouts are approved in digital 2D productions, the background layout is forwarded to the background painting department, while the artwork indicating the placement of character, props, and effects (which can also be referred to as character layout) is reviewed by a technical director (an animator or assistant animator, depending on how the production is structured) who will assess whether new poses are warranted. In cases in which new poses are generated, they are forwarded to shot setup after they are approved as well as archived in the library for potential future use. It should be noted that this kind of a setup primarily works on projects with very simple backgrounds and limited animation. Whenever the budget and schedule allows, it is advisable to start background painting after the animation has already been completed.

On both traditional 2D and digital 2D television series with limited budgets, the production pipeline is often set up so that storyboard panels are meticulously planned out in order to bypass the layout phase. Using this methodology, the character,

prop, and effects placements indicated on the storyboard provide the starting point for the animator, and the location drawn on the storyboard panel is embellished to generate the painted background. In this type of pipeline, background painting can potentially take place before animation or on a parallel track, as long as there are no registration issues involved. *Registration* is required when there is an overlap between the animation level and objects in the shot or between levels of animation. On shots in which the animation must register to the background, the painting of that background is prioritized. Once approved, a low-resolution version of the background is forwarded to the animation department.

Scene Planning

On a traditional 2D feature production, every shot is sent back to scene planning after all major production steps have been completed for compositing and preparation for sweatbox. (See details on sweatbox earlier in this chapter.) It is the scene planner's job to ascertain that all the elements in a shot can be cohesively combined and that all registration issues are addressed.

During the scene planning process, the character's path of action and interaction with his or her environment is digitally set up so that it can be viewed in motion. In partnership with the layout artist, the scene planner works out all camera mechanics, composition, continuity, shot transitions, "same as" shots, and screen directions for the sequence. Next, the layout supervisor views the updated animatic and signs off on the timing in preparation for the director's review. As soon as the director has approved the animatic, the brain trust team is gathered for shot review and breakdown.

Shot Setup

On a digital 2D production, there is a *shot setup* phase that must take place in preparation for the start of animation. A technical director (TD) imports all required elements for a shot, which include: character builds; props and effects assets (if applicable); a low-resolution version of the painted background; model sheets; comparison size charts; an audio file including the voice track, music, and sound effects; and an animatic file for the animator's reference. Depending on the software used, the TD may also place the camera for the animator's use. At the same time, the layout or the storyboard panel (whichever is used in the animatic) must be thoroughly vetted for any new designs or special poses that require the creation of new assets so that the

library can be modified to provide the animator with all of the information he or she needs to start work on the shot.

Layout Turnover

As noted earlier, the purpose of the layout turnover or the brain trust is to assemble the production leads on a feature production and to evaluate the sequence complexity level shot by shot. When allocating resources and setting (and resetting) quotas, an ongoing "complexity analysis" should take place in order to estimate who is doing what and how long it will take. In digital 2D, this form of analysis must take place in pre-production so that it can be determined how much of a character build is necessary for an episode or sequence. If a character is being used extensively, then a full turn-around model is built (including mouth, eye, and hand charts). If the character is used in only a few shots, a very limited library most likely will suffice.

On paper-based traditional 2D projects, it is at this stage that the shot is broken into levels in order to best accommodate its narrative intention. The shot's levels may include:

- **Overlay (OL):** These elements sit on top of the animation.
- **Underlay (UL):** This level sits below the animation.
- **Overlay/Underlay (OL/UL):** When the animation is both above and below a given layout level.
- **Background (BG):** This is the setting for the action. Every shot must have a background in order to provide the animator with information on registration points, the field and character size, and the ground plane. This element always sits below all the other artwork.

As the sequence is reviewed, shots are selected that will be earmarked for color key purposes. Every detail in each shot is thoroughly assessed, for example, regarding whether a prop should be created in traditional 2D, digital 2D, or CG and how best to incorporate it. At the same time, the team will explore options to simplify shots and minimize registration issues.

All details generated from this meeting are entered on the draft or production notes that should be incorporated into the tracking system so that artists working on the shot can be made aware of any specific requirements.

Animation

On both traditional 2D and digital 2D projects, the objective is to imbue the character with enough personality so that he or she seems to be spontaneous and alive. Similar to live action where each actor has his or her own "process," traditional 2D animators may prefer to do rough drawings which are fully inbetweened, or

draw using clean lines only with few inbetweens. Either way, the producer should facilitate their strengths to bring out their best performance skills. The director sets the vision for the overall project and the animators follow his or her guidance in the chosen style of animation.

Animators on a traditional 2D project must have access to the rough layout, the voice track, the exposure sheet, and the character design model sheets in order to commence work. The rough layout is equivalent to a live action set or a theater stage; it is a setting for the performance of the characters they will bring to life. Animators use the animatic as reference to understand their specific creative goals in context with the shots before and after their assignment. By doing so, they are able to have a solid notion of what is involved in their shot and how it ties into the larger picture. Hearing the way the lines are delivered by the actor, animators try to emulate the emotions and the beats that went into the performance. Referring to the timing information provided, the animators use the track reading as a guideline, indicating what sounds or parts of dialogue hit on what exact frames. Depending on the number of characters and the way in which the levels are deconstructed in a shot, animators use the columns on the sheet to indicate the proper exposure of each drawing or indicate where they should be placed. They put down instructions on how the drawings should be shot based on the determined style of animation ("on twos" or "held," for example). The animator also makes notes on what is called a *breakdown chart*. The purpose of this chart is to illustrate the animator's thinking behind key drawings or to show the "arc" of action. He or she uses the chart to indicate the spacing between the drawings, whether for example, to favor the first or the second exteme, which creates the visual effect of change in the timing. The chart is also used to indicate special mouth action. After the key poses for the shot are approved, the animators may either draw the inbetweens themselves or delegate them to an inbetweener.

On large-scale productions, it is common to have a number of animation supervisors or leads who oversee a team of animators and inbetweeners. The supervisor may be responsible for animating a sequence or in charge of one of the main characters. Depending on the nature of the show, the second method may be a better choice because the animation will be more consistent. In this type of a production structure, the animation supervisor develops the character's personality based on the director's instructions. The supervisor explores the character by drawing facial expressions and posture. Next, the supervisor animates the character's movements through walk cycles and may delve further into the character's personality by finding appropriate idiosyncrasies that allow him, her, or it to be unique. The supervisor

breaks down the approved character design into basic geometrical shapes in order to teach the team and the cleanup lead how the character should be drawn. This breakdown is sometimes even done by the character designer and/or cleanup supervisor. The supervisor may also provide this information to a sculptor so that *maquettes* (sculptures) can be created for the characters. The purpose of the maquettes is to enable the animators and the cleanup artists to have a three-dimensional reference when trying to keep a character on model while he, she or it is in motion.

The benefit of digital production for traditional animators is that they are able to scan their drawings into the rough layout and view their animation immediately. They can re-field and adjust the layout in order to better match their animation, knowing that scene planning will be responsible for the final setup. By being able to easily access the completed shots that precede and follow their assignment, they can create a performance that is congruous with the rest of the project.

On digital 2D productions, the animation phase is the stage in which the production can pick up the pace of the schedule because the bulk of the heavy lifting was already accomplished in pre-production, when all main character builds were completed and archived in the asset library. The larger the library, the more quickly the animators can complete their shots. The library is expanded upon based on how significant a role a particular character has in the project. A full library for a main character includes heads, arms, hands, torso, legs, eyes, common gestures, signature moves, expressions, walk cycles, run cycles, and mouth charts. Another key advantage to digital 2D production is the fact that when the artist is using assets, unless the asset is purposefully distorted, it doesn't go off model. Going off model is a very common reason for retakes in traditional 2D animation.

Using a low-resolution or grayed-out version of the background in order for the animation to read clearly, the digital 2D animator can begin his or her assignment. At this point in the process, the animator's main objective is to utilize the existing assets and focus on animating and movement. He or she will create new poses only when absolutely necessary. First, the animator generates key poses that capture the broad performance objectives of the shot. This step is referred to as *blocking*. Once the director or animation supervisor has approved these key poses, the animator then fleshes out the animation between the key frames by adding inbetweens, thereby finessing it further. If a new pose or asset is created for a shot, this newly generated content is added to the project's library so that other artists can access it in order to avoid a duplication of this effort. Because the asset library is the core organizational tool for a digital 2D production, depending on the size of the project, having a dedicated

asset manager can be vital. He or she can make sure that all labeling protocols are consistently followed and that the assets are properly archived and maintained.

Similar to traditional 2D production, the dialogue track or audio file plays a crucial role in digital 2D animation. The last step in finishing the character animation phase is lip sync. Hearing the way the lines are delivered by the actor, the animator emulates the emotions and the beats that went into the performance. He or she can achieve lip sync by selecting the predesigned mouth shapes and placing them in the appropriate spot in the timeline where elements are organized and animation is created.

Once animators complete their shots and have their supervisor's approval, they are shown to the director. These reviews can be handled either individually on a monitor or with a group of animators in what is typically referred to as a dailies review session. A group session is a very beneficial process, as artists have the opportunity to hear the various critiques and feedback from the director and to learn from their colleagues. This type of communication can help streamline the amount of time that a director or supervisor has to communicate key information. If, by chance, the director cannot communicate in person what changes he or she may want to see on the shot (as on a project that is being animated by a subcontracting studio), he or she can draw and write on the digital tablet and provide specific instructions for the animator that can be shared.

On a traditional 2D production, after animation approval, the artwork is sent to cleanup layout. On a digital 2D production, it is common for the animator to wear multiple hats, meaning that once the animation has been approved, if the shot requires effects, he or she takes on the job of an effects animator. If the approved digital 2D shot has no effects needs, it is readied for compositing.

Cleanup Layout

On traditional 2D projects, the cleanup layout department is a key step in establishing how all the levels of artwork are to be combined, as outlined in the brain trust session. The cleanup layout artist's primary task on a traditional 2D project is to make sure the rough animation can be integrated into the shot. The layout is adjusted to accommodate the drawings produced in animation. To do this, the cleanup layout artist checks the shot for camera mechanics, scaling or timing adjustments attributed to any shifts in character pacing or movement, and makes tweaks to the material so that it all works together. Depending on how the pipeline is set up, some productions rely on blue sketch. The

purpose of a *blue sketch* is to designate how the animation interacts with its environment and more specifically, to show the registration lines. It is essentially one piece of paper that shows the extreme poses of each animation level so that the layout can be adjusted to accommodate the performance.

Once any fixes are made, the background or environment must be prepared for color work. The cleanup layout artist is also responsible for stylistic and set continuity. He or she tightens the rough lines in preparation for the background painter. It is at this point that a lighting guide is produced if one was not already established during pre-production. This guide may also be referred to as *tonal keys*, and it indicates scene lighting and position of the light source.

After cleanup layout is complete, the shot is passed along the production pipeline for cleanup animation and background paint.

Background Painting

Background painting is a production step that is shared by both traditional 2D and digital 2D productions. The background painter is a combination lighting expert and set painter. At this stage, the setting or layout that has up to now been in black and white is finally ready for color. By applying color to the layout, the background painter gives the objects weight, dimension, and texture. This color helps to create mood and atmosphere in a scene.

The background painter uses visual reference such as color keys to guide his or her work. Color keys or a color board is created by the art director during pre-production. It provides guidance for the color treatment and lighting nuances for a given feature sequence or a TV episode. The background painter's job is to emulate these keys as he or she digitally paints over the artwork produced in cleanup layout on a traditional 2D production or on a production background on a digital 2D show.

On a large-scale production, the background supervisor is responsible for overseeing the work in progress and making sure that the director and the art director's objectives are met by the team of background painters. The art director and background supervisor work jointly with background artists in establishing the initial look and maintaining it throughout the project.

On a traditional 2D project, once the background has been approved, it is made available to the animation check department in preparation for the ink and paint process. On a digital 2D production, a low-resolution version of the approved background is sent to shot setup in preparation for the start of animation. Once animation is approved, the background is sent to the compositing department.

Cleanup Animation

Unique to traditional 2D productions, cleanup animation takes place after key animation and inbetweens have been approved in sweatbox. This process ensures that characters are kept on model and have a consistent style of line work that is solid enough to prepare the animation for ink and paint. Cleanup artists play a vital role in maintaining the performance of the characters as set up by the animator. They focus on size relationships between the characters and consistency of volume. This work is comparable to that done by the makeup, hair styling, and costuming departments on a live action production. The cleanup artist needs to add the appropriate details to the character, such as hair movement or the right number of buttons or stitches on an outfit. But most important, it is the cleanup line that shows up on the screen. This expertise therefore is critical to the success and believability of the acting.

The key cleanup lead collaborates closely with the animation lead to draw the final cleanup model sheets for character designs and poses. Before a production gets underway, the lead instructs team members how to draw the characters and their specific nuances. Once shots are ready for cleanup, the key cleanup leads are responsible for managing their crew, their assignments, and the workflow to ensure that they are tracking to quota and are meeting the agreed-upon level of quality.

Upon completion of a shot, the cleanup drawings are scanned and then reviewed by the lead. If the shot is ready, it goes to the director for evaluation in a cleanup department dailies session. Once approved by the director, the shot is passed along the production pipeline to effects or, if no effects are required, to animation check.

Effects

Effects artists are the magicians on the set, creating the illusion of exploding buildings and devising natural elements such as rain, fire, and smoke. They are responsible for the animation of any item that is not acting-related, such as character highlights, shadows, and costume glint. In a traditional 2D production pipeline, the effects department will likely use both hand-drawn animation and software programs to generate the desired look. Compositing programs in both traditional and digital 2D are also highly useful in enhancing the shots with a variety of effects options.

Effects animation plays a key part in the creation of the actual look of a project. In addition to creating excitement and dazzling

the eye with fantastic imagery, basic lighting effects such as tones and shadows can greatly enhance the production value of a show. Tones give the face and body dimension. Contact shadows that appear under a character when there is a direct light source can help anchor the animation so it doesn't seem like the character is floating. These elements can easily be achieved through use of digital software or hand-drawn if that method is preferred stylistically.

The role of the effects supervisor is to follow the director and art director's lead in creating an effects style for the project by establishing the main designs (such as how flying insects that glow in the dark should be treated). Effects supervisors are also responsible for teaching team members the specific techniques for the creation of the various effects and their application. An important part of this position is knowing which shots gain the most from having effects and which shots can do without. The old adage that "less is more" should be adhered to in order for the money shots to receive the adequate time needed and for the film to have a consistent overall look.

On traditional 2D projects, the effects animator uses the cleanup layout and the cleanup animation and applies the effects. He or she updates the timing information and/or exposure sheet in order to indicate the way the effects level will integrate with the rest of the artwork. After the director has approved the rough effects completed by the effects animator, the shot undergoes a cleanup pass if necessary and is then sent to editorial for approval in a sweatbox session.

Something to keep in mind as a producer is that all too often, this department is overlooked in terms of budgeting and scheduling. When projects fall behind in meeting their quotas, the first items that seem to get simplified or cut are effects, because they are not always seen as an essential part to storytelling. Such decisions should be weighed heavily so as to not blindly take away from the overall artistic quality of the project.

Animation Check

Animation check is, in essence, a step during which a thorough quality control check is undertaken on a traditional 2D project. Once a shot has been completed through cleanup animation and effects and the background has been painted, it is necessary to check all elements to make sure that it is ready for the next major stages of production: color styling and ink and paint. Because all the artwork has been digitally scanned up to this point, the checker reviews the shot digitally as a whole and also one level at a time. The animation checker is responsible

for finding solutions for any problems with the shot, such as missing artwork or mechanical adjustments. On an even more detailed level, checkers are responsible for making sure the animation is on model, ensuring that all color separation areas follow through, and addressing continuity issues. If, for example, a character has a bandaged left arm in one shot, but in a subsequent shot the bandage is on the right arm, there is a continuity problem. In this case, the animation checker will ask a cleanup artist to remove the bandage from the wrong arm and redraw it on the correct arm. Or, if an explosion occurs in a shot and continues into the next shot but the intensity of the effects doesn't hook up from shot to shot, the animation checker enlists the help of an effects artist to add, delete, or alter additional drawings for continuity purposes. If there are any remaining registration issues, these will also be settled by the animation checker, who must outline the most efficient way to accomplish the task, depending on the scope of the problem. In readying shots for the ink and paint step, the animation checker studies the line quality closely, verifying whether the line density or resolution necessary for the large screen has been provided. The goal is for the shot to leave animation checking as close to perfection as possible.

Color Styling and Ink and Paint

The color styling phase of production involves bringing color to the characters, props, and effects through the creation of color palettes and in congruence with painted backgrounds. This phase takes place under the guidance of the art director. Pending the studio's choice of terminology, this production step may be referred to as *color modeling*. On both traditional 2D and digital 2D projects, color styling is handled during the pre-production stage. On a digital 2D pipeline, however, the color application to the design can take place before the artwork is symbolized and rigged in preparation for the character builds; on traditional 2D projects, the artwork remains in black-and-white line drawing format until it reaches one of the last steps in the production pipeline: the ink and paint department.

The color stylist's goal is to produce a color scheme that compliments the animation and features the makeup, hair, costume, and effects suggested in the color keys or color boards. He or she establishes indexed color palettes that allow for readily accessible color choices based on the lighting scenario (night versus day) or the environmental conditions (wet versus dry). The color stylist also selects colors for lighting effects such as tones, rims, and contact shadows, which can be applied during the compositing stage. In selecting colors, it is important to make sure that the

character and effects levels do not blend in or contrast too much with the background, unless there is a creative reason to do so. Primary areas that color stylists concentrate on are a character's skin, the inside of the mouth, and hair and costume.

Ink and paint is the next step in the process. Ink and paint artists apply the established color palettes from shot to shot. This detail-driven work can be an intricate, labor-intensive process, and although the digitization of ink and paint has had an enormous impact in expediting this process it still requires careful attention to line consistency and demarcations. One strong advantage to TV productions that share the same digital software as their subcontractor is that the ink and paint artists can apply the exact shade required and, by doing so, color correction during post-production is minimized—if not eliminated. It is important to note that deciding to have sophisticated colored lines as part of the design can more than double the time it takes to finish painting a character because of the attention to detail needed at line intersections. With that knowledge in mind, the ink and paint department should be appropriately paced and staffed.

Because subtle changes in lighting can cause more than subtle changes in color, the expertise of a color stylist is required after the ink and paint process to fine-tune each shot on feature productions. For example, if a character is in a semi-dark room lit by candles, the color scheme will be different than if the same character is seen in broad daylight; even if one of those candles burns out from one shot to the next, there are lighting nuances to be considered. Thus, although indexed color palettes can inform much of the color work in these scenarios, individual elements will probably still need additional aesthetic adjustments to make them fit the particulars of each shot.

Once the color styling and ink and paint work has been approved, the shot is forwarded to compositing.

Compositing

Applicable to both traditional 2D and digital 2D pipelines, compositing is the process of assembling all artwork specifically created for a shot. This department has evolved from being a finishing department to one of the most important departments in the animation pipeline. Compositors are responsible for a significant portion of the look of the final frame, from adding atmospheric elements, to simulating 3D cameras, refining 2D cameras, and adding *parallax*, or depth cues, to different layers of the background. The compositor can also affect the read of a character by offsetting the character against itself to create what is called an *offset rim* or *offset tone*.

Once the compositor makes sure all elements are in place and the shot is literally picture-perfect, the shot is rendered for one final color sweatbox approval or review session. If notes arise in this session, the compositor makes the necessary adjustments before a shot is handed off to final check for or to post-production depending on the production pipeline setup.

Final Check

Final check is the final quality control review. On some productions, the compositors perform this task, while in others there is still a final check department. Once the shot arrives in final check, it contains all of the artwork that has been completed during production. The final checker specifically concentrates on all details, such as identifying any final registration issues and color inconsistencies. He or she carefully scours the shot frame by frame to seek out any potentially problematic visuals. Once the final checker detects and fixes any errors, the shot is delivered for final output in preparation for post-production.

10

POST-PRODUCTION

The Role of the Producer During the Post-production Phase

Reaching the post-production stage is a huge milestone for the producer. At this point in the process, what remains to be assembled are the final visual and audio elements needed to create and deliver the finished product. The project's schedule, variety of delivery formats for the final version, and its audio requirements determine the post-production steps ahead.

The role of the producer during post-production is diverse. Activities that take center stage during this phase include overseeing the tracking and the completion of all retakes and acquiring notes and approvals from the buyer/executive in order to lock the picture. The producer works in close collaboration with the Post-production supervisor, who sets up post-production sessions and monitors their progress. If the project has an acquisition arrangement with a buyer, the producer has the sole responsibility to complete all of the "deliverable" items as stipulated in the contract. If the arrangement is a partnership with the buyer, the buyer or studio typically has its own post-production department that will be very involved and supportive of this stage. In the case of an independent film, the deliverables must be finished off in the specific format(s) specified or the producer could be in breach of contract. In all of these scenarios, there are a variety of items to be completed during post-production in addition to the completion of the final sound and picture deliverables, including compilation and completion of documents such as legal contracts, purchases, and work-for-hire statements from crewmembers and voice talent; audio-visuals of "behind-the-scenes" segments for the preparation of electronic press kits; and materials for online marketing efforts such as the project's website, viral campaign, and social media sites to name a few. The producer also focuses on finalizing credits and main and end titles, which can be very time-consuming and must be maintained throughout the production process. Working with

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the legal department, the producer must get legal signoff on the credits as well as clearances on the final visual and audio elements of the production. In television projects, depending on the number of episodes produced and the schedule, the producer may also be managing episodes in the pre-production and production stages at this time. The flowcharts in Figures 10-1 and 10-2 show in detail the steps that the producer must take in the post-production of both features and television projects.

Prior to the commencement of post-production, the producer and post-production supervisor should assemble a crew and set up deals with post-production facilities. (See Chapter 2, "The Animation Producer," and Figure 2-1 for more information on this topic.) Following is a list of possible staff members and elements that should be in place by this stage, depending on the project's requirements:

- Delivery specs
- Picture editor and assistants
- Post-production supervisor
- Composer
- Music editor
- Sound supervisor
- Sound editorial crew
- Facilities: audio, video, post-production labs to create digital/film outputs (if applicable)
- Draft of the final credits
- Final/locked picture to length as per the delivery requirements

Working with the Post-production Supervisor

The role of a post-production supervisor is all-encompassing in terms of being responsible for delivering the many elements of a final product. Therefore, this key person needs to be hired long before the start of post-production so that he or she can set up this portion of the process. In animation studios that produce a significant amount of projects, the post-production supervisor may be on staff and be assigned to the project as it nears post-production. Depending on the studio, a feature post-production supervisor can start as early as pre-production. In this capacity, this person typically coordinates efforts with the production and editorial team in organizing dailies, color or stereoscopic test sessions, and various story reel/animatic screenings. The post-production supervisor can also be responsible for scheduling recording sessions to do dialogue pickups. This role oversees film processing, video tape recording, editing, transferring, and dubbing during production. He or she frequently interfaces with ancillary groups and provides them with digital media and/or

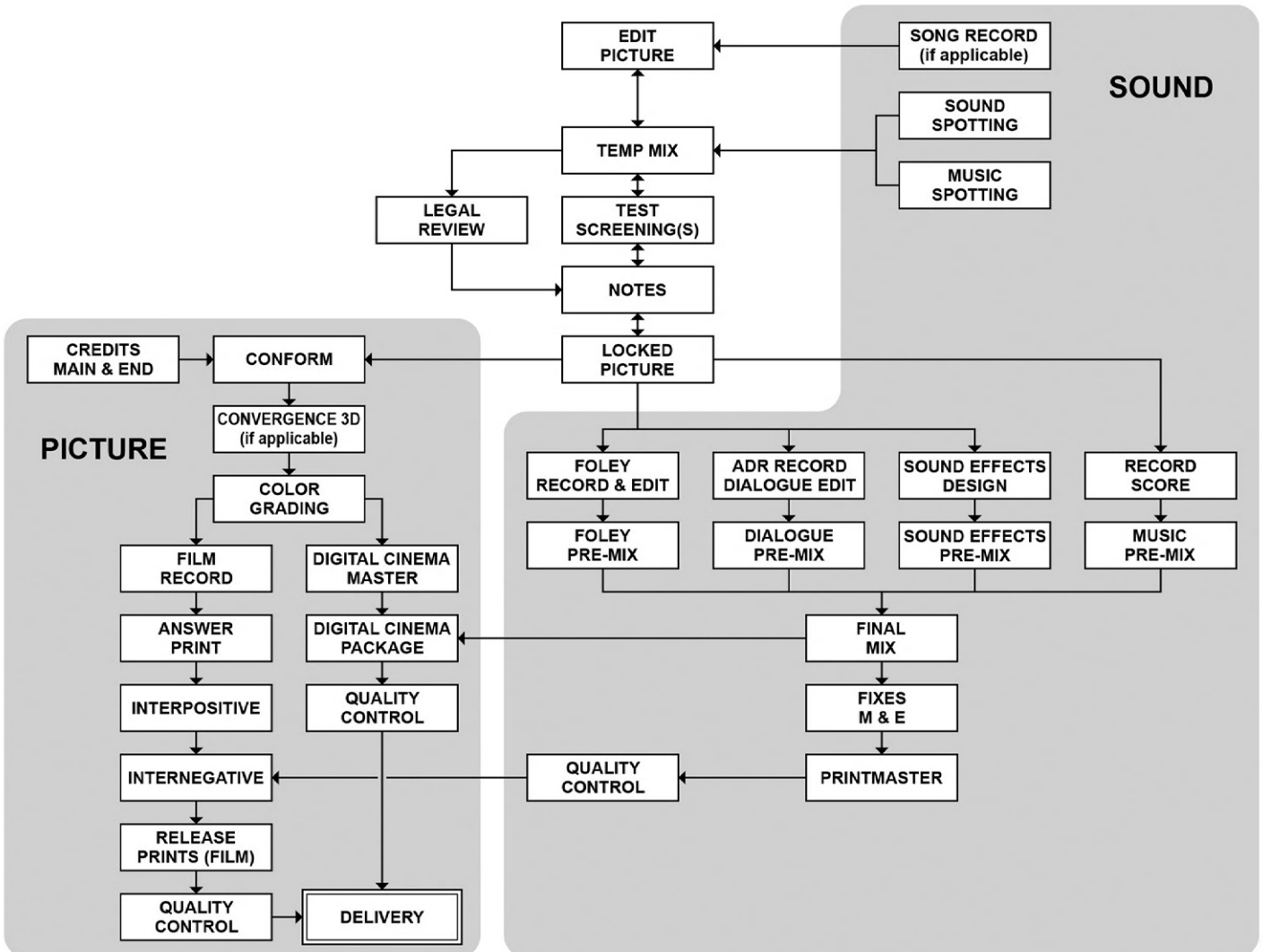


Figure 10-1 Post-production flowchart: features (digital and film completion).

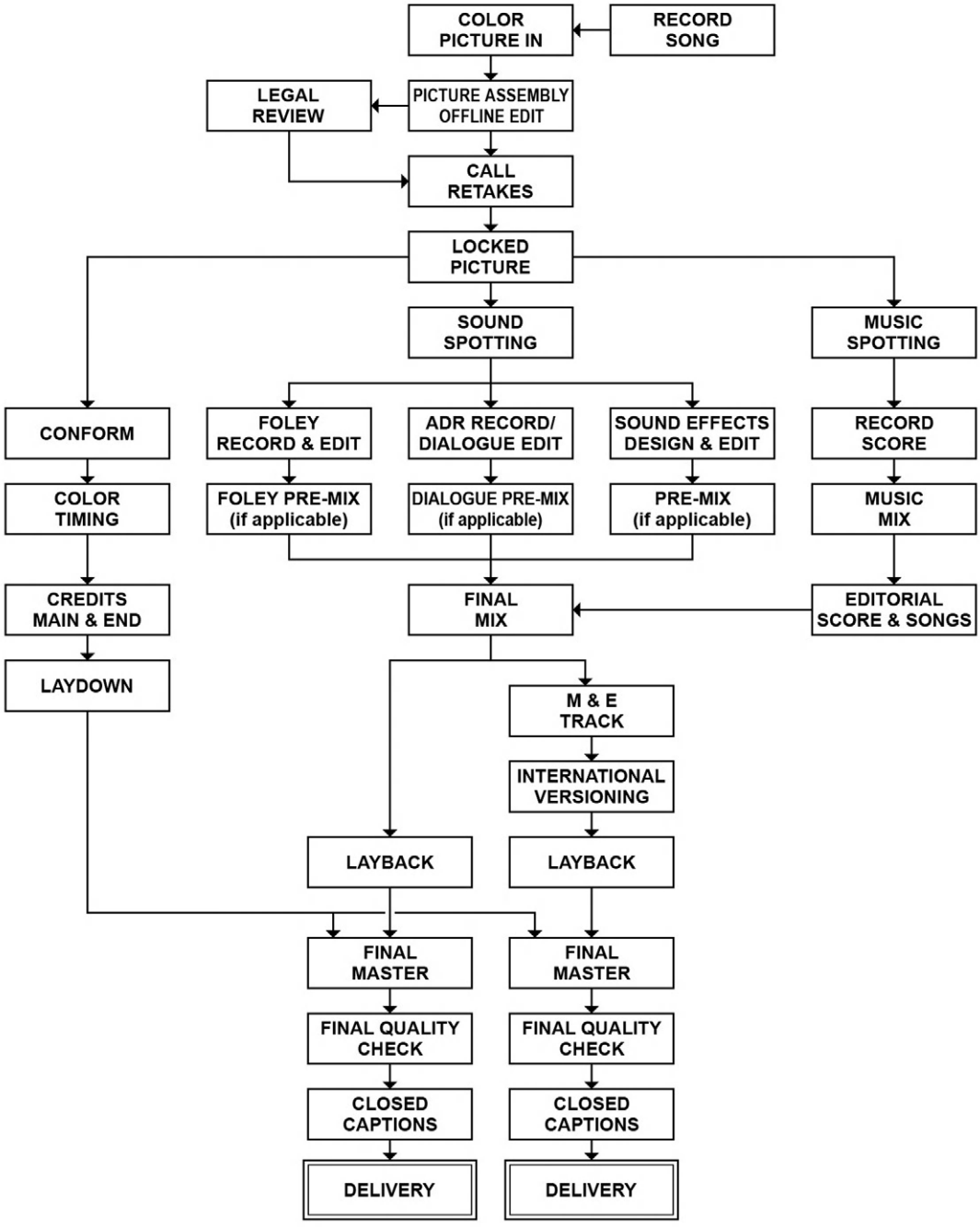


Figure 10-2 Post-production flowchart: television (video completion).

When Green Isn't Green

John Donkin, Producer, Blue Sky Studios

When is green not green? What does that even mean? The crux of this question lies within what the definition of what green is, and under which color space it is defined.

Although "first things first" is a logical attitude to take in the world of animation production, it pays to think about "last things sooner than later" as well. Thinking ahead to post-production needs and processes can help you to avoid last minute cheats or heartbreak. Even more important, some well-spent forethought will save you money even earlier in the production pipeline.

When you are first designing the color of the film, an understanding of what your distribution network is going to be can be immensely helpful. There are different color spaces for different methods of distribution, and this range is ever-expanding. For example, here is a potential list of distribution options to consider: digital cinema (DCP); film (35 mm); HD Blu-ray; SD video; Internet (digital media: QuickTime: Flash, etc.); and stereoscopic (3D; available in several proprietary formats). Each of these formats can have unique color space parameters such as luminance, white point, and gamma curves, which can greatly affect the look of the final color grading. Once you understand which of these formats will be used, it's ideal to decide on the "native" color space of the "original," which can be optimized to ensure the best possible quality in the master. It is critical to calibrate the local color space you are working in to match the color of your output master to save valuable time and money in the initial color grading process.

Early phase testing with your vendor can also ensure a smooth pipeline and should include conversion to secondary output formats. This step ideally should be done before color design gets too far along. Knowing exactly what steps will be needed in your particular output medium will save you money in color design. For instance, there are some colors in the digital spectrum that do not translate very well to 35 mm film. This also varies depending upon which film stock you plan to distribute. If your distribution is determined to be 35mm film: it's best to know how these colors will translate between the different mediums. It's even better if you try not to design into those specific color ranges that generally have trouble in the first place. Here is a prime example of "green not being green"—during the making of *Ice Age: Dawn of the Dinosaurs*, there was a scene that included a "green noxious gas." The particular shade of green was chosen and tested because we knew that on film, the color film stock had a more limited range than we would find in the pure digital releases. As it was, this element required special care in the color grading process for film.

Similarly, thinking ahead in the realm of sound post-production will also save time and money. Collaborating with your sound designer to figure out when the optimal time to commence sound design is extremely important. In some cases, it is helpful to get some sound design early in the process to aid in animation. For example, presound design of dinosaur vocalizations on *Ice Age: Dawn of the Dinosaurs* enhanced the reels, but also provided a better guide track for the animators. On other projects, it might be beneficial to wait to do more sound work after the animation, when the cut is tightened up.

Know ahead of time that one of the hidden costs of post-production sound is doing a *conform*: the process of taking the sound effects that are cut to picture and having to recut them if the picture changes. If you do too much of this work too early, a lot of effort goes into the conform that could have been better spent on straight-ahead sound editorial effort. It's very important to communicate which sections of the film are "solid" and which sections still need work editorially before launching into the conform. It's best to keep the sound effects editors working on new footage, as opposed to just chasing an ever-changing cut.

Although unforeseen changes and unexpected costs are bound to happen in the production of an animated project, thinking ahead, communication, and solid planning can definitely save money and resources, and that's just smart to practice "the sooner the better" on any production.

audio and video elements needed to put together trailers, publicity images, website content, game development materials, or television spots, for example. Throughout the production, the producer or studio will need to show parts of the film to potential promotional partners in order to market it effectively. The post-production supervisor has to make sure that all elements needed for these presentations are ready.

Before post-production begins, it is the supervisor's responsibility to prepare a schedule for the producer as well as to obtain bids from the various facilities, including video houses, audio houses, labs, digital film printers, and duplication facilities. Once facilities are selected, the producer and post-production supervisor negotiate the various rates and deals. Most post-production facilities have standard hourly rate cards for services. It is common practice for the post-production supervisor to negotiate for a reduced hourly rate or possibly a package deal to include all services. In the case of a large studio, this negotiation process may be taken out of the hands of the producer and handled by the post-production department. Deals may already be in place with a studio because they can negotiate in bulk and offer the post-production facility work on a number of shows. The schedule can play a significant role in a deal negotiated with a post-production house. If you are involved in the negotiations as the producer, before signing a contract, be sure that the facility has reviewed and agreed to your schedule and delivery requirements so that no surprises come up later. It is important that the producer ask questions regarding the amount of work a post-production house already has at the time their project is going to go through the facility to ensure that they are treated as a priority client. In making the final selection for the post-production house, the producer must determine the "all-in" cost for services to be rendered in order to allocate the appropriate funds for all remaining steps.

The post-production supervisor will also work with the producer and director to identify a project's sound team. If the project is a large one, a sound supervisor will typically be hired to find and manage the sound team from both a creative and operational perspective. If a sound supervisor is not in the budget, the post supervisor may hire a sound designer early on in the process who will drive the overall creativity of a project's audio needs. Unexpected hurdles are part of the reality of post-production. The producer and post-production supervisor must be both flexible and proactive to allow for these challenges and overcome all obstacles posed by the typical reshuffling of the schedule. For example, on a television series, it may be that a particular episode delivered by the subcontractor has a very high percentage of retakes and cannot be completed according to the original

schedule. Executive or studio notes may involve creative retakes that affect the length of the picture. In such cases, locking picture on the original date may not be possible. In order to accommodate the need to do fixes, it is necessary to delay and revise the schedule. The post-production supervisor aids the producer in determining priorities and rearranging the schedule to accommodate them. He or she needs to be on top of coordinating and communicating these changes to the director and the buyer/executive and must update all applicable vendors on scheduling changes in order to avoid costly fees due to late cancellations.

During post-production, the producer and post-production supervisor continue to be involved with the ancillary groups, providing all required materials. They also need to oversee that screenings are set up for executives and marketing, the licensee, and promotional personnel. Finally, it is the producer and Post-production supervisor's job to oversee that all audio and picture materials and final artwork are archived. This archiving effort might also include original materials from subcontractors shipped back for possible retail purposes. All digital files also need to be catalogued and stored in case there is ever a need to go back to the source materials.

The Post-production Process

This chapter covers basic post-production steps involved in taking the project from work-reel to final delivery. This part of production is ever-changing due to advancements in technology: as such, this overview will provide a general understanding of the process.

When it comes to post-production, picture editing is automatically the first step that comes to mind. In animation, however, each shot begins and ends in the editorial department and is pre-edited down to the exact frame before start of production. (See the section "Slugging/Animation Timing" in Chapter 8 for more detail.) It is therefore an anomaly to describe the picture editing process of an animated project as strictly part of post-production because it shapes the project starting in pre-production, with the story/pre-visualization and editorial teams building reels right out of the gate.

Locking Picture

Starting during the storyboarding phase, the animation editor plays a central role in constructing the project and ultimately in locking the picture. The editor's primary objective is to help the director realize his or her vision as the show gets developed, from

its germinal stage through final color. Casting the right talent for this role is critical because it requires editing skills in addition to an understanding of animation timing and storytelling. After all, the editor's timing sensibility dictates how the show is going to be paced. The editor's job also entails conforming or syncing of the audio to the picture. He or she matches the temp soundtrack to the picture, starting with storyboard panels through animation and final color.

Much of the editor's and his or her team's time is spent on maintaining and keeping track of all picture and audio elements as the project goes through its many evolutions. Internally, as the hub for the production, the editorial department is where each shot is sent for review and approval in sweatbox after all key production steps. As shots are approved, the story reel/animatic is updated to include the latest iteration. (See Chapter 8, "Pre-production," and Chapter 9, "Production," for detailed information on shot creation and progression as well as the role of the editor.) Externally, this department is responsible for all picture showings while the production is in progress. For example, when there is a test screening or a picture presentation for the buyer/executive, the reels are locked in order to facilitate a temp mix, which is essentially an early digital output. A *temp mix* or a *temp dub* is a rough visual cut combined with a rough soundtrack mix created for preview screenings that serve as a barometer to measure the project's progress and effectiveness. After each screening, the frenzy of notes in regard to "footage changes" ensues. At this time, the picture editor makes the required fixes and documents all revisions. All dialogue and effects tracks, temp music scores, and exposure sheets (if applicable) need to be conformed or updated to match the picture as well. Ideally, a robust production tracking system will instantly and automatically inform all appropriate crewmembers of such changes. Additionally, numerous file transfers and outputs will have to be made in order to update in-house staff, ancillary groups, and external contractors (if applicable).

As the project begins to wrap up and the final color shots are cut in to the reel, a feature editor's job shifts to making sure that the tracks are ready for the pre-dub stage. During Post-production, the editor is a valuable resource because he or she knows what "takes" have been selected as well as the sensibility of the director, who may be busy with other responsibilities or projects at this point. The editor will often stand in for the director in guiding the final mix or be there for the director as a sounding board.

On projects handled by a subcontracting studio, the producer must determine how production art, rough animation, and final color can be securely transferred between the domestic studio

and satellite studio(s). Taking strong measures protecting the project against any form of piracy is critical and must be handled as early as possible. For shows that have been outsourced, Post-production begins when the picture is returned. This version of the show is referred to as "take one." The subcontractor deliveries may take place via hard drives, DVDs, and electronic or digital delivery methods facilitated through the use of an FTP site. The shots are transferred into an offline editing system such as an Avid or Final Cut Pro, where they are assembled. Next, the producer, director, and the editor view the picture and call retakes. Although a number of retakes may be fixed quickly and efficiently in-house by an editor, others may be better addressed at their source and are therefore compiled as a list of retakes to be sent to the subcontractor. While they wait for these retakes or shot fixes to be completed, the editor continues to edit the picture. As revised takes are received, they are viewed and upon approval, are cut into the picture. If the shots are problematic, further retakes are called.

Monitoring the calling of retakes is an important area to manage. An up-front agreed-upon percentage of iterations allowed by key decision makers is essential. That way everyone is on the same page as to how many changes can be made based on a project's fiscal parameters. The production tracking system is an excellent tool for the line producer or production manager to keep a close check on the retakes called and maintain control of the budget. This system should be structured to track the percentage of changes made on each shot in order to identify and avoid potential overages as early as possible. Now that instant fixes in the Avid or Final Cut Pro, and efficient digital deliveries from subcontractors make the turnaround of a retake faster than ever, some executives or directors may think that gives them more freedom to call out additional retakes. For example, if a note is called to speed up a cut by taking out every other frame in a shot, this is much more easily achieved digitally than if a negative cutter were assigned such a time-consuming manual task. But even if they are faster, retakes still cost time and money and should be carefully managed.

As time and resources are almost always limited when post-production commences, the team may decide to agree on a "could be better" (or a "cbb") list in which the shots are prioritized to be fixed based on their significance in the story. Although the ideal scenario would be to retake all shots as many times as needed until they are perfect, budget and schedule restrictions do not allow this option. Sometimes the producer may have to lock picture before all of the final shots are received, due to time limitations. In this configuration, the editor can replace

an incorrect shot with a corrected one as long as the duration of it has not changed. It is important to establish a coding system in order to make sure the proper version of the shot progresses through the production pipeline and makes it into the final cut. Either a new shot number can be assigned to the corrected shot or letters of the alphabet can be added to the numbers for the purposes of efficient and consistent identification.

After all of the approved shots are cut in, the picture can be *locked*. A *locked cut* or a "*locked picture*" technically means that the length of the show is set in stone. However, "locked picture" takes on a different meaning pending the project's format, budget, and timeline. Theoretically, it should no longer be possible to change a single frame. Realistically, however, most directors try to do fixes on shots up until the final moment: it is therefore critical that the producer and post-production supervisor collaborate with the director to agree upon and balance which fixes are necessary. On feature productions, for example, both music and sound effects spotting take place before picture lock in order to prepare the film for test screenings and also to give the composer and sound effects editor ample time to tweak and perfect their work to match the picture. On television series, in contrast, it is common for audio post-production steps to follow once the picture has been officially locked.

Test Screenings

For film projects, there are usually a few test screenings scheduled. The purpose of these screenings is to get feedback from a targeted audience about the clarity of the story and character arcs, for example. In the case of a comedy, it is also important to check that the humor is playing well with the audience. Depending on the results, additional test screenings may need to be scheduled to allow for feedback on revisions made based on the initial response, which can include adding and deleting shots.

Determining the best time to schedule a test screening is very challenging on an animated project as the average audience member may not respond well to "work-in-progress" shots. Since they are not accustomed to seeing a rough cut of the film, it is important to explain up front that the picture is accompanied with temporary music, voices, and sound effects. As a general rule, the first screening should ideally take place after at least 50 percent of the animation has been completed and enough color shots have been cut in to give the audience a sense of the picture's look. With that said, it is best to have as many completed shots in the reels as possible. At the same time, the longer you wait, the more expensive the potential changes are, because the shots have gone farther down the production pipeline and are therefore are more costly to revise.

Music

Music plays a central role in animated projects. It creates mood, atmosphere, pacing, and momentum. On feature productions, the first foray into the project's requirements for music takes place when the picture editor builds a *temporary music track* to complement the intention of the show. By hearing the choice of music or the score, the viewer should be able to define the picture in terms of its genre (thriller, musical, comedy, etc.). The score is realized by the composer. As early as the script stage (if possible), it is helpful for the director to meet with the composer and share his or her vision in order to get the composer thinking about the project's creative needs and how the music can serve them. The composer's primary goal is to capture the essence of the project and create an original score to match.

Producers have to take into consideration three elements when the time comes to selecting a composer: talent, budget, and schedule. On lower-budget productions, they can contact music agents, who submit sample reels of their clients. Up and coming composers—especially those who work on the team of more established composers in the business—are also good options to consider for lower-budget projects. The producer and director choose the best candidates and forward their names to the buyer/executive. Depending on the experience level and style of music sought, they may decide to test a few composers in order to determine the best match for the project. On productions with higher budgets, the producer—in collaboration with the buyer/executive and the director—makes contact with agents representing well-established composers. Some studios also have a music department in place to handle such communications with composers. The advantages to selecting "A-list" composers are the quality of their work and the potential revenue on soundtrack sales. This level of talent tends to be very hands-on throughout the course of production. Due to the lengthy schedule of features, however, these composers have limited availability, as they can work on only a few projects in a year, and a deal should be put into place as early as possible to ensure that they can be involved. (For information on the role of the composer in relation to producing songs, see Chapter 8, "Pre-production.")

Once the composer has been selected and the negotiations have been completed, the composer meets with the director and producer to go through the project's key sequences using the script or storyboards as the basis for their discussion. Articulating musical needs is very difficult. Thus, the composer must function as a detective in search of clues. He or she has to understand the director on an instinctive level. The director, on the other hand, should refer the composer to other pieces of music and freely

share his or her emotional reactions. It is up to producer to do everything in his or her power to keep the communication line between the director and composer as clear as possible to ensure they are both in sync. It also falls on the producer's—or, more likely, the post-production supervisor's—shoulders to inform the composer of the project's specific needs, such as the date by which the score needs to be completed.

On higher-budget projects, it is common to hire a music editor. The extent of the music editor's role varies from project to project but is typically focused on creating a temporary music track. This "temp" track then serves as a solid guideline for the composer with regard to the tone and emotion that the director is trying to achieve. The official music spotting session takes place when the director and composer review the film together, going through shot-by-shot and discussing where cues start and stop and which parts should play without a score in the background. On feature productions, both the picture editor and the music editor also participate in this meeting. Ideally, the next step for the composer is to put together a full mockup/synthetic orchestration (also called a *demo*) for each cue or key sequence. The producer and the director hear and sign off on each cue until the entire score has been generated and approved. Depending on the extent of the involvement of the buyer/executive, final approval of the score may or may not require their input.

For orchestrated projects, far in advance of the completion and approval of the score, the producer, the music department (if applicable), the post-production supervisor, and the composer set recording dates. Time must be allotted for the composer to work with an arranger to prepare the score for performance by an orchestra. The composer will often have a scoring stage of preference, and the music department or post-production supervisor will then book the stage and coordinate all other details. He or she will communicate the required number of sessions, the number of musicians per session, the picture playback format, and the recording format to the individual responsible for setting up the stage. The composer then employs a contractor to assemble an orchestra based on the project's allotted budget and schedule. (For more detailed information on this topic, see Chapter 6, "The Production Plan.") An average orchestra can range anywhere from 60 to 100 musicians. The studio or producer may opt to hire world-renowned orchestras based in cities such as London, Los Angeles, and New York. On the other hand, due to budget restraints, some productions may choose to go non-union or travel to other places where costs are lower and they can "buy out" the talent in order to avoid paying union rates or residuals. This method can result in substantial cost savings, as typically a buy-out is a one-time fee.

For projects with limited budgets and time, such as television shows, the composer will write a score but cut costs in areas such as orchestration. Under these circumstances, the composer may choose to create the score by combining an electronic score mockup produced with a computer or digital audio workstation (DAW) and augment it with some live recording. Often, before the show is returned from the subcontractor, the composer compiles a library of original musical themes and character cues. Portions of the score, or cues, for these kinds of productions are frequently reused in order to have full musical accompaniment for the entire show.

After the score has been recorded, the music editor oversees the music mix under the guidance of the composer, creating music mixdowns and then editing the score to picture. Music *mixdowns* are the process whereby all the instrument recordings are mixed down to a manageable number of tracks. In this process, the instruments in the same family are grouped together and referred to as *stems*, such as the brass stem or the woodwind stem. Stems represent the individual pre-mixed groups that make up the final music mix. The use of stems allows the re-recording mixers to emphasize—or if need be, to remove—certain instruments during the final mix.

Once completed, the final recording is delivered as a Pro-Tools session to the dub, or final mixing stage. At this point, the score is ready for the mix, which combines the music and audio in the final audio track for the project. For more information on how the music track is integrated with the picture, see Figures 10-1 and 10-2.

Audio Post-production

Spotting Sessions

In the *sound spotting session*, every shot is evaluated from the point of view of how audio can best enhance or add clarity to the storytelling. During this session, the director and producer determine specifically where music and sound effects should be placed. Usually, there are two different spotting sessions—sound spotting and music spotting; however, whenever possible, combining the two sessions to ensure that everyone is in sync is highly recommended, as everything needs to work together sonically in the final mix. In either case, the producer must facilitate opportunities for as much cross-talk between the groups as necessary.

During a spotting session, the project's creative needs, technical issues, and the schedule are discussed. In television, a sound spotting session is usually held once the picture is locked because the budgets are very limited and there is usually no money or

time for the sound team to put their energy into reconforming the audio to a revised cut. It is typical for this session to include the producer, the director, the supervising sound editor, and other key members of the audio team. On a feature, sound spotting can take place at various times during production, depending on the project. If time allows, sound spotting may take place before a preview screening. Otherwise, the spotting session takes place several months before the final mix. The director, the picture editor, and the post-production supervisor or producer go through the show with the supervising sound editor and key members of the audio team such as the dialogue editor and sound designer. As early as the creation of the story reel/animatic, the picture editor builds a working "temp" audio track that contains the original dialogue, a temp music score, and temp effects. This track is all done to timecode, which is an electronic indexing method that denotes hours, minutes, seconds, and frames (00:00:00:00) elapsed. While the sound spotting session is in progress, the working temp track is used as a template to guide the direction of the audio. The temporary effects and music helps provide a sound designer with a more rounded view of the project's requirements.

After the sound spotting and music spotting sessions have been completed, the music track and sound effects/dialogue tracks are worked on concurrently.

Sound Effects Design and Editing

Sound effects can range from animal calls to spaceships zooming by to the ambient noise made by an air conditioner running in a shot's background. They play an important role in conveying the overall tone and emotion of a project. They also help place the viewer in the story's setting and time frame by adding the applicable atmospheric ambience. The key person on this team responsible for the overall sound style of a project is the supervising sound editor. Once the spotting session is complete, the supervising sound editor goes through the show and cues the various sounds to be created and/or taken from a sound effects library. On shows with a large enough budget for original sound effects, the supervising sound editor works with a sound designer to develop the sound style for a project. It is this person's job to create original and unique sounds that do not exist in a sound library. On some productions, the term "sound designer" is used to describe the person who is responsible for the overall sound of the final track.

Once designed sounds are created, they are combined with sounds taken from a library and are then edited to picture. Using the cue sheets as a guideline, the sound effects editor selects sounds and synchronizes them to picture. It is the sound effects editor's job to cover all sounds, including the backgrounds.

Backgrounds or atmospheres (also known as *ambience tracks*) are ongoing sounds such as room tones, freeway noise, a refrigerator hum in the kitchen, or an underground rumble.

Dialogue Editing and Automatic Dialogue Replacement

Dialogue editing takes place throughout production as lines are recorded, re-recorded, inserted into, and deleted from the picture. As a project nears completion, the director and the picture editor in partnership with the dialogue editor or automatic dialogue replacement supervisor go through the picture to determine what lines need to be edited or replaced. New dialogue is acquired through *automatic dialogue replacement* (ADR), which is the process of recording new dialogue or re-recording old lines that have poor audio quality. This process is also known as *looping*. In preparation for the final mix, the dialogue editor adjusts the sync and cleans up audio (deleting lip smacks or pops, for example) on each shot. In order to do this, he or she looks for alternative lines, replaces syllables within words to correct pronunciation, or fixes audio glitches.

The dialogue editor works with the director to assess what additional dialogue will be required for shots that can't be fixed, in addition to off-camera lines needed to clear up plot points, for example. These select lines are then compiled and put to timecode in order to generate the ADR cue sheet. Meanwhile, a studio is booked and the voice talent is scheduled to do the recording work to "pick up" their various lines in what is known as an ADR session. Depending on the number of actors needed, this work is usually handled over multiple sessions, as it is not always easy to schedule the talent. The rule of thumb is 12 to 18 lines per hour, depending on the actor's abilities. It may be a single actor required or a *loop group*, which is a collection of voice actors hired to do miscellaneous character voices, crowd noises, and other wild sounds as needed. During the ADR session, the cued line is played for the actor to provide timing and tonality. The actor is then recorded while performing the line in sync to the picture. Next, the dialogue editor takes the ADR lines and edits them in sync with the picture.

Foley Sessions

Foley is the creation of those sounds that involve performance in sync with physical movement. Foley work is created in a studio that offers many different props and elements specifically developed by Foley artists for generating sounds in sync to the picture. Sounds that would emanate from actions such as footsteps, cloth movement, and punching are all examples of audio elements

that are recreated during a Foley session. After the appropriate sounds are selected during the spotting session, they are cued to timecode by the Foley supervisor. On the Foley stage, the sounds are created according to the cue sheets by the Foley artist(s) and are later edited into the picture by a Foley editor.

Pre-mix

The purpose of a *pre-mix*, also known as a *pre-dub*, is to combine like sound elements to reduce an extreme number of tracks—a streamlining effort that helps expedite the final mix. This step is specific to high-end productions that include a very full soundtrack chock-full of dialogue, effects, music, and Foley. In this scenario, because the number of tracks far exceeds the capabilities of a mixing board, a pre-mix session is in order. On features, for example, the tracks are often organized into 5.1 splits and pre-mixed to save time. This process is handled by re-recording mixers and is usually done prior to a director reviewing the sound during the final mix. If this mixer is not also one of the editors on the project, it is usually the first time he or she has had the opportunity to preview the audio. By doing a pre-mix, the mixer can become familiar with the sound track and is more easily able to control the different audio elements during the final mix, making the process much more creatively efficient and cost- and time-effective.

Final Mix

The *final mix*, also referred to as a *final dub*, is where the dialogue, Foley, sound effects, and music are combined by one to three mixers, each having different specialties. Depending on the talent and studio, there will typically be a music, a dialogue, and an effects mixer, or some combination of the three. A final mix can take as little as a day and as long as a month, depending on the resources and the format of a project.

During the final mix, the mixer has the option to use the pre-mixed tracks or, if necessary, can return to the original elements of that section provided by the editorial team and adjust the levels accordingly. Separate dialogue, music, and sound effects (including Foley) stems are created in this session. These stems are used to create the final audio deliverables for a project. In addition, 6-tracks (also called a 5.1) and 2-tracks (LtRt track) are created. According to the buyer's delivery requirements, the producer determines the mix format for the show (Dolby Digital, DTS, or SDDS) and handles all license fees and legal agreements involved with the chosen format or formats.

Once the show is mixed, there is usually a final playback of all reels in which key people, including the director, the producer, and/or the buyer/executive review the material and give final notes. Fixes communicated at the final playback are handled during additional mix sessions scheduled as a part of the plan. For theatrical releases, final mixes must always be approved in a large auditorium in order for the audio levels to match the bigger venues.

Audio Deliverables

Every project has a predetermined set of deliverables. The producer must take into account all such items during the budgeting and planning stage of a production, as these requirements directly affect a budget. There are various formats and multiple release mediums for a final picture: for example, domestic 6-track, domestic 2-track stereo, and 5.1 channel music and effects master (M&E). Additional deliveries can include 7.1 audio, a "near field" mix designed for home entertainment such as DVD and Blu-ray releases, and vision-impaired tracks, which describe the action.

Printmasters

Once the final mix is signed off on, the various final mix stems are combined to create the finished audio tracks including what are called the *printmasters*; the M&E; and the mono or stereo dialogue, music, and effects master (DM&E). Printmasters are created based on the final delivery format requirements for the project. For television, typically the domestic 2-track stereo master is "layed back" or placed on the master tape output. For film, a soundtrack negative is created from the appropriate printmasters. This negative may contain more than one printmaster format and is used to make the composite print (sound and picture) as well as the release prints using different digital audio formats (for example, SDDS, SRD, or DTS).

Music and Effects (M&E)

In order for a project to be sold worldwide, an *M&E master* must be created. During this process, the music and sound effects stems are used to produce a mix that does not contain the original dialogue because it will be replaced overseas. This version is used in foreign countries that in turn translate the original dialogue into their respective language and hire actors to ADR or loop the lines to match the time code of the picture. These lines are then mixed together with the M&E.

Dialogue, Music, and Effects (DM&E)

The DM&E is used in the creation of ancillary needs and products in the domestic market. Video game production, trailer creation, and other marketing and licensing needs can draw upon this master, using all of the materials or separating them as needed.

Picture Post-production

Conform

The final editing session in which the locked master picture is created is known as the *conform*, or an *online assembly*. The items needed for an online session are as follows: all source material, the deliverable technical specifications from the buyer/executive, and the edit decision list (or EDL) based on the offline cut.

The EDL is a complete notation of every final edit made on the project. The online editor uses the highest-quality original elements to match the low-resolution editorial cut through an EDL assembly process. The conform can be a much smoother and more efficient process if the materials come into the session with consistent naming conventions through all phases of work. The producer should oversee the establishment of such a system from the earliest story reel efforts through all versions of the updated reel throughout production to facilitate this consistency. Another important delivery detail to ensure is that the EDL frame rate is consistent with that used in the post-production process. Technically, the merge of sound and picture for video material is 23.98 frames per second (fps). If one element is running at 24 fps, while the other is running at 23.98 fps, the picture and sound will lose sync almost instantly. If the rate specification is not set up accurately from the start, it can mean a difference of a slow week versus a few efficient hours of conforming effort required by the post-production team.

Once all of the visual elements are properly assembled in the online system, color grading can begin.

Color Grading/Color Timing

The adjustment of color on film or video in terms of its contrast, hue, tint, brightness, saturation, and density is referred to as *color grading*, *color timing*, or *color balancing*. This process of finding the right balance of color elements is complicated by the many possible end outputs required for an animated project. One of many playback options that can affect this process is whether it will be viewed using mono or stereoscopic projection. The size of the screening rooms and differing screen

materials and various powered projectors can also play a role. When it comes to television broadcast outlets, it could be viewed in either high or standard definition or stereo. This process must also take into account whether the final format is DVD, Blu-ray, or other home entertainment options, or—most challenging—some combination of the aforementioned outputs. On a high-budget theatrical release, there can be as many as 20 color gamuts that encompass various continuity and balancing efforts in order to accommodate all of the possible screening options.

Color continuity work involves checking that transitions from one shot to another are contiguous and making sure the frames do not appear too light or too dark while in the same setting, for example. Color balance is the practice of getting the neutral colors to look neutral. This step can also be called *white balancing*. It is often helpful to use a waveform monitor and vector scope to help adjust the pure white elements in a scene to be white while making the pure black elements in a scene black. These scopes are calibrated to help see exactly how the colors are represented. Once these two extremes are set, it generally forces all of the colors in between to fall into place fairly closely, thus providing a great place for the start of color timing. Hue correction is needed in order for characters and objects to have a consistent appearance throughout a project. Shrek looking the same color green from start to finish is an example of where hue correction is used. All of this work should be completed under the watchful eye of the project's director and art director.

The type of projection system that is to be used for a stereoscopic or 3D show should also be factored in the formatting of the project's final output. Otherwise, technical glitches that may appear include ghosting, floating windows, or vertical misalignment, all of which must be addressed appropriately. For example, *ghosting*—a slight offset of an onscreen image—can take place when a bright object is set against a dark background and appears to have a double image because some of the light that is intended for one eye is also registered by the other. This artifact is more likely to happen when there is great contrast within an image, and it can be eliminated by darkening the lights or lightening the darks of the image onscreen. In general, the edges of the image will always appear to "fall off" the screen, and the projected images will appear darker overall because of the polarized filters on the projection device, or the audience's eyewear, or both, in some systems. Care must be taken to make sure that the proper convergence is used within a shot, drawing the audience's eye to clearly catch the desired focal point and not giving the viewers a sense of motion sickness in the process.

Now that digital finishing has replaced a good deal of traditional lab work, the whole process is much faster and less expensive. For example, with digital finishing, post-production facilities can utilize color look-up tables (also known as LUTs) that have a strong influence on the appearance of the final piece, by creating a color space that is appropriate to and remains consistent within the desired output. Special 3D LUTs can be generated to help map any color to another color automatically without the use of a color timer. These efforts are far more manageable than when working with film, as there are many other factors that can play into making film color inconsistent from the start. These include the film's temperature, age, exposure, and stock.

Knowing your required deliverables and trusting the advice of the post-production supervisor will help you make wise decisions as to what will serve your project as the most adaptable and efficient color space target(s). Your budget will also dictate whether you have the means to color time to seven different grades or just two, for example.

The Element Reel

In the case of a television series, an *element reel* should be created. This reel is a master videotape or digital storage device upon which various repeat elements are placed. These items include: the title sequence (both the standard and the textless version, which is used in international distribution), main and end credits (if they are the same per episode), studio and distributor logos, union logos, and so on. As the show is assembled, the element reel helps the editor use his or her time efficiently. Rather than having to work from different source reels or needing to go back to the Avid, having all these materials on one tape is a far better organizational approach. When the series is complete, the element reel is archived with all of the master episodes.

Credits (Main/Opening and End)

The *credits* list all talent and production staff who have worked on a project. They can typically be seen at the beginning and end of a show, depending upon the agreed-upon style and format. The placement and size of the main credits and some end credits are based on deals negotiated with key talent prior to the start of production. Main credits typically include a show's producer, director, and celebrity talent. The end credits include everyone else. There is a standard order and hierarchy that closing credits follow, with key talent at the beginning and departments following in the order of production process.

The producer collaborates with the legal/business affairs department as they generate the credits and send it to the buyer/executive for approval weeks in advance of the due date. A list of names, titles, and facilities used with the correct spelling is compiled and kept up to date throughout the course of production by the associate producer or production manager. On television episodes, the producer has to adhere to a specific time allotment for credits. Feature and direct-to-DVD credits have more flexibility in terms of the number of people listed and the pacing of the credit roll. The size and font of the credits are chosen or designed by the producer and director. The visual style of the credits may be influenced by the color and font of the main title sequence of the project. In the case of a film, the credits may have to work around outtakes or other special footage created specifically for the closing of the film. After final sign-off, credits are often sent to a title house to be timed out for a crawl if that is the chosen style of presentation. They are returned to the post-production team digitally to be assembled with the rest of the final visual elements.

Closed Captioning

Closed captioning refers to the display of text on the screen that provides the viewer with audio related information. It includes dialogue, the name of the speaker(s), and description of music and sound effects. This process typically takes place as the last step on a television series after the episode has undergone final quality control and before delivery.

Textless Versions

Any content that has written material within it requires that a textless version be created, which is necessary for foreign distribution, as each country/territory has very specific distribution regulations and specifications. Key areas of concern are the main and end title sequences and possibly the credits. Depending on the situation, additional shots may also need to be provided. If subtitles or burn-ins have been used in shots or sequences, a textless version must be made so that theatrical exhibitors or TV broadcasters, for example, can create their own translation of the description in the non-English-speaking countries. In addition, certain countries may require a neutral version of shots that include any written signs integral to the story, such as “Danger,” in which such signage is blank. Neutral versions would utilize a symbol or icon instead of a written word, so that its intent can be recognized and understood by a wide range of audiences across the world, thus eliminating the need to make specific translations for every country.

Final Delivery

On a feature project, once the picture has been color-timed and the soundtrack negative is created, they are combined to produce the first married *check print*. A check print is created to make sure that all the elements are lined up as intended and that the sound track is in sync with the picture. After that, there are a series of answer print sessions, where color is judged and corrected by the film color timer. Each time a note is made, a new print has to be processed and judged again, until it is finally approved and deemed ready for release printing.

A similar process occurs when creating a video master for television broadcast or digital cinema projection. Depending on the budget and the number of prints required, a digital negative can be created from the original digital intermediate (DI) files. From this negative, an answer print is struck and approved. Once the answer print is approved, the negative is used to create an interpositive, which in turn is used to generate an internegative. In the past, release printing was done using the internegative, but more recently, the internegative and interpositive technique has been used for archival purposes and release printing in foreign markets; domestic release printing is done directly with the original digital negatives. For digital projection theaters, the DI files are tweaked to the appropriate color space and used to create a digital cinema package (DCP), which is then sent out to the various theaters on hard drives, loaded onto their servers, and unlocked using a special electronic key that tells the server how long the package can play for. The key is an important element of the DCP playback, as it helps thwart piracy by allowing the content to play only at specific times. The same DI files can be further color corrected and used to create high definition (HD) and standard definition (SD) masters for home entertainment formats that include Blu-ray, NTSC, PAL, and Internet downloads, as well as a 4×3 version that is frequently used by airlines.

Throughout the post-production stage, there are numerous review phases that are referred to as *quality control* (QC). This procedure is necessary so that it can be determined whether all audio, video, or film materials meet the delivery requirements from a technical standpoint and that there are no errors in any of the master materials. In the case of a film, if it is to be released in a variety of outputs (SDDS, DTS, SRD, SR, etc.), it needs one review for visual, another for sound, and a third for sync quality for each different output version. Typically, the post-production supervisor is responsible for overseeing this process. In the case of the audio QC, a sound supervisor may handle this work. It is usual for final QC to include all principal stakeholders such as

the director and the producer because this is the last step before the project is delivered to the client/buyer.

Final Deliverables

At this stage, the project is finally ready to be aired, mass-produced on DVDs, released in theaters, or digitally delivered on hard drives as an option. Formats for delivery of the final product vary from project to project, such as the composite answer print or 35 mm release print for film; a DCP for digital projection; an HD CAM with (8-track) split-track audio for broadcast distribution; an NTSC digibeta CAM, PAL, or SECAM masters, or other digital data tape for the creation of international transfers, other various masters, and archival needs. In the case of the Internet, it may be as simple as a QuickTime file. Other deliverables include some or all of the following: the final conformed script; final credits; the original negative, the interpositive, and a low-contrast print; the textless background; the work print; the magnetic master composite mix; the music and effects track; music cue sheets; song lyrics; the composer's score; a compilation of all original deals; and clean DVDs for ancillary partners.

Some studios and distributors may accept all elements digitally; others require film outputs and hard copies of other materials. Again, all of these items should be clearly delineated with the releasing studio, production, or distribution partner far in advance to avoid any surprises to the budget or schedule this late in the process.

Archiving

The producer and post-production supervisor should make sure that the following elements are archived properly for future reference and reuse:

- Omitted scenes
- Checkpoint and preview screenings (saved on tape)
- Visual elements (masters)
- Audio elements (masters)
- Logs from ADR and original voice recording sessions
- Subtitles (also foreign language elements)
- Closed captioning
- Pre-dubs
- Custom sound effects library
- Digital delivery elements (digital masters on data tape; LTO-4 or LTO-5 are the current standards)
- Publicity stills
- "Making of" videotapes, still photography, screen captures, published articles

11

TRACKING PRODUCTION

The Importance of Tracking

Tracking a project in animation can be a colossal challenge unless it is handled with forethought, diligence and consistency. An animated feature production typically has tens of thousands of complex interdependent elements to track—not only when they are initially created, but also as they undergo multiple iterations. Combining the need to know the location and status of each of these elements while managing a crew of as many as a hundred plus artists and technicians, often in multiple locations, makes the development of a robust, well-organized tracking system imperative. Successful production tracking is therefore one of the key ingredients to ensure that a project is completed on time and on budget, potentially even exceeding the expected production quality. The ultimate purpose of the tracking system is to connect all of the many facets of a project, including the budget, schedule, assets created, and footage produced in order to reflect their interdependencies and status, thereby enabling the producer to have an accurate and succinct "live" overview of the pace of production on both a macro and micro level. Using the data generated by the tracking system, the producer is equipped to guide and manage the project efficiently from its inception through delivery.

If you are lucky, you work at a production studio where there is already a tested and reliable tracking system in place. If you have such a jump start, creating new charts or templates to suit your style of working and/or the unique requirements of the project should be expected. If, on the other hand, you don't have a fully developed system in place, you will have to determine the best approach to getting one set up for your show. When prepping for a project, make sure to allow enough time to sort out this critical element and work with an IT expert and your CG supervisor (if applicable) to determine the best path to follow. As you make your selection, you need to ensure that your

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system is flexible and nonlinear. Take into account the basics—that materials will be revised multiple times and story and editorial changes will affect production dates constantly. Your system will need the capacity to be adaptable, keep detailed records, and easily update information as priorities change throughout the schedule. Building from scratch can be costly, but if that option is available to you, be sure to allot enough time to determine workflow and shot progression through the production pipeline, as programming the process will inevitably take longer than expected. There are also off-the-shelf products that can be licensed and/or used as a template to be tailored for your specific project. It may be that you are responsible for only the pre-production and post-production tracking systems if you have a subcontractor handling the production and therefore you do not need a complex system for that part of the work. In this case, it may make sense to keep your costs down and to create something relatively simple in-house such as the charts offered in this chapter. With that said, be sure to check that your subcontractor has a tracking system in place with the ability to provide you with any necessary data you may require.

When building your system, define the workflow up front and determine data to be tracked and reports to be generated from both a "macro" and "micro" standpoint. A tracking plan should be based on your project's master schedule. This schedule should be used as context from which to analyze how a project is "tracking" to the original budget, schedule, and list of assumptions. Determining the various reports, standard or specialized, that need to be generated as early as possible is very helpful in gearing a system to meet your needs. Also, the type of information that needs to be communicated, to whom, and in what form should be taken into account.

A tracking system is made up of multiple components that vary, based on the type of project you are producing. It is the organizational process that defines the workflow for everyone involved. All work created must be tracked from its inception to final iteration. Linking to the editorial draft and keeping versions organized and clear is critical in ensuring that everyone is working on or with the correct asset and not wasting their time on elements that are out of date. Keeping up-to-date records of all notes, creative or technical, for every single asset built throughout the project is also vital to an efficient workflow.

Production management and artists all need to be acutely aware of the need to keep their applicable information up to date

in the tracking system. This form of participation by the entire team can best be achieved when the tracking system is configured as a secure, cross-platform, web-based portal to the project. Each individual user has the ability to enter only specific sections of the tracking system that pertains to his or her area of expertise and is held accountable for each entry he or she makes. The team member's customized access allows his or her interaction to be both streamlined and targeted. How to enter appropriate information into the system is an important part of the crew training that should take place when commencing a new production. If not, the reports that are generated will not be useful, as the data will be invalid and counterproductive in helping a project stay on target.

Equally as important as accurate reporting is that the tracking system serves as an essential tool in facilitating the daily workflow of the crew. The entire production staff can log in to this database in order to determine their daily tasks and to view production notes and pertinent communications. Utilizing the tracking system, the management team assists the artists by prioritizing assignments and providing them with access to the latest information regarding any asset or shot. In this setup, the tracking system functions as a virtual production hub where team members can collaborate as an ensemble. Artists can view work in progress by other team members and see how their work fits into the larger picture. When questions arise, they can communicate efficiently via screen sharing and posting notes.

No matter how a project is structured for execution—entirely in one physical location, as a virtual studio, or through the use of subcontracting studios—the tracking system is the glue that keeps all of the production components together while moving the project forward expeditiously. The production tracking system can be integrated into the production process to serve the following purposes:

- Master schedule
- Development tracking
- Tracking software development and application
- Macro and micro charts
 - Pre-production
 - Production
 - Post-production
- Artwork for ancillary groups
- Archiving of digital content

Turning Production Chaos into Pipeline Central

Don Parker, Co-Founder and CEO, Shotgun Software

The idea for developing production tracking software came directly from my firsthand experience on a feature-length animated project. A producer asked me to help him set up a super-efficient studio for story development on a movie. The schedule was incredibly aggressive for any studio, especially for one that was setting up a new pipeline from scratch.

Our goal was to form a production house with the producer, director, art department, editorial, writer, and a small previsualization team; to pull the entire story reel together; to get signoff from the studio; and to turn over all details to a production studio in a different country—all within a matter of months. (I forget how short the schedule was, but it was short!)

I came from a commercial production house, used to ramping up crews and working really quickly on elaborate effects-driven live action spots. It was always fast and lean in that world. The producer and I figured this project was more of the same, just at a larger scale for a longer period of time. Our production team was top-notch and the show had the budget to hire the right number of coordinators and PAs to support the artists. How hard could it be? Right?

That was mistake #1.

We got busy determining the needs for each department, which included a lot of computers and software, an updated network, a fast Internet connection, and loads of desks and chairs. We even built edit suites, a server room, and a sound booth for scratch tracks. We decided that we needed a shared file system, email, calendaring, and so on. (This was before Google applications, by the way.) We were doing this as the crew was starting work, so it was hectic at first. But then it was done. Phew. We had a pipeline! Right?

Um, no. Mistake #2.

We quickly realized something was missing. An artist worked all day on a shot that had gotten cut, wasting his valuable time; the director was frustrated that one of his hundreds of notes had been lost; the pre-vis artists couldn't turn around new ideas fast enough because they were spending too much time doing administrative tasks such as making QuickTime movies and moving files around; critical information pertaining to the history of a shot was missing; key people hadn't seen the latest cut of the film and were therefore unaware of the addition of a brand new complex set; an offsite storyboard artist didn't have access to the latest concept art for a main character; and the list went on. Multiply these issues times 100 and, as you can imagine, the stress began to mount. Things were slow, kludgey, broken. Although we had lots of manpower, we couldn't do our best work or react fast enough to new ideas because of the time we were spending on logistics. Whatever we were missing came down to a lack of automation and weak communication. The producer pointed out that we were not working "super efficiently," as he had asked, but rather quite the opposite. Ugh. My bad . . . clearly it was a different animal than commercials.

Instead of throwing more people at the problem, we decided to invest in tools to help us track the production and sort out the mess. To our surprise, there was nothing out there to buy. Everyone we asked was building their own tools, so we rolled up our sleeves and got to work.

To start, I hired a developer with whom I had worked before, and we started building tools as fast as we could. We decided to divide and conquer: I'd iterate on the designs for tools with the people suffering the most; he'd build quick prototypes and roll them out, then fix what sucked. Repeat. We had no idea what we were building at first. We were learning on the job while trying to reduce as much pain as possible. We weren't building a Swiss Army knife, but rather a collection of scalpels.

As we began to create systems to manage notes, track artist assignments, parse cut info from editorial, notify people of important changes, and generally make available all the latest information we had about the movie for everyone to access any time, the studio began to transform itself into a much more efficient machine. We got to a point at which the director would give a note in the edit suite on a shot, and the pre-vis team would deliver a new revision back to the editor before the meeting was over. The time between creative iterations was quick, and we could react swiftly to any change or idea.

Now *that's* a pipeline.

We ended up moving the company, partnering on the production portion of the project. It gave us the opportunity to further develop our toolset over the next year to support a team of hundreds of people who were widely spread across multiple companies and locations. We made a lot of mistakes and tried hundreds of things, each of which helped us understand what a pipeline can and should be.

What we had built was a flexible framework to store and share all important production data, along with a set of tracking and communication tools, as well as hooks for automation. And although it was an amazingly educational experience to figure out how to build a pipeline and tracking system while in the midst of a production, let's just say there are better ways to use a production's time and effort, and we are glad to be on the other side of that challenge now, with toolsets in hand before any green light says *go*!

Master Scheduling

An approved budget provides the context for creating a master schedule which in turn generates the information for production tracking. As modifications to the plan are made throughout production, referencing this macro timeline is a way to monitor whether a project is tracking to the original list of assumptions such as the delivery date, budget, and expected quality. Taking into account the project's complexity, the schedule is used to plot out the timing for the key production phases and to inform reporting efforts throughout production. By establishing the specific dates for meeting pivotal production goals such as start of pre-production, the producer can further break down the workload into micro schedules. The individual departmental due dates create the project's tracking framework and establish how much work has to be accomplished on a daily, weekly, and monthly basis in order to complete the production on time.

Development Tracking

As an idea first begins to take shape, a record of all of the original materials should be archived. Development tracking requires a reporting system that can indicate status or location of the

various elements being created, including script development and conceptual artwork exploration.

When a specific timeline is established for the development phase of a project, the producer can set up dates by which particular tasks must be accomplished and made available for the buyer's/executive's review and approval. Having targeted dates pushes the writing process forward, and the availability of detailed notes regarding elements in the script that are problematic helps the creative team focus their efforts and continue to whittle away at the specific weak spots until story issues are resolved.

As visual development gets underway, the tracking system can be used to create and manage a list of the main assets and potential design treatments. Alongside the list of artwork needed, the production team can create a visual reference library. By archiving stills and videos that illustrate possible ways to explore artistic choices, the director can be specific in communicating his or her design expectations. As assignments are handed out, artists are able to securely log in to the project's tracking system and access all material needed. At the same time, artists are made aware of the timeline for the work to be completed, and as soon as the assignment is finished, they can post the artwork for the director's review.

Another use for tracking production development can be for research on the history of the project. Even if a particular idea or image is not used at first, the director or producer may decide to re-visit it. It is therefore useful to have information readily available on the creator of the content and where the material in question is archived. An example can be found in the case of writing that may need to be reviewed in order to determine whether screen credit is applicable.

Tracking Software Development and Application

Software development is another key production component that can be managed using a tracking system. Early in the production stage, the producer must determine the amount and type of research and development necessitated by the project's production design in the context of its budget and timeline. As the tools are developed and tested, both the software programmers and users benefit from having a shared virtual space where they can communicate objectives, report problems, and set up completion dates that match the production requirements.

Macro and Micro Charts

Macro tracking is accomplished through the creation of charts that provide an overview of a specific stage of production such as

pre-production, production, and post-production. Micro tracking, on the other hand, encompasses charts that monitor the minutia of a specific step. These types of reports track assets as they get developed and approved and/or monitor shots as they go through the various departments. The macro and micro tracking of the data on the project are interdependent, in that macro charts set the overall goals to meet key production stages, whereas micro charts pace the work progression in order to fulfill these dates.

In order to start tracking production on both macro and micro levels, it is important to establish a nomenclature or a defined naming system and numbering convention. By creating this labeling method, all production staff share a common language that enables them to refer to a specific shot and the various iterations it undergoes and how it fits into the show. Depending on the project, it may require the use of all or some of the following codes: asset type, asset name, asset ID, act number, sequence number, reel number, shot code or number, insert number, version number, and layer number.

Once the project's nomenclature is established, the producer can develop his or her pre-production, production, and post-production tracking charts and reports. The following sections include samples of generic tracking charts for the key production phases to be used as reference or guides to the type of charts that a producer may need to create. The concepts behind each of the charts can be applied to either CG or 2D projects. As is the case for all charts in this book, they should be reconfigured to meet the needs of the particular project. (See Chapter 6, "The Production Plan," for an example of a master schedule.)

Pre-production

After a script has been green-lit for production, a macro-schedule can be created to establish and track the project's key milestones. There are many elements to be tracked in pre-production such as script and storyboard revisions, element designs, art direction keys, and voice recording (See Chapter 8, "Pre-production," for more detailed information on the preplanning required for specific production steps.) Figure 11-1 shows a generic pre-production macro tracking chart starting with design through completion of the animatic. Right from the beginning, it is critical to consistently evaluate patterns of meeting production targets or the lack thereof. The tabulation of the "Offset (+/–)" information enables the production team to assess where there might be reasons for shortfalls and implement solutions in order to keep the project on track.

SEQ. EPISODE	TITLE		DESIGN START	DESIGN END	ASSET START	ASSET END	DIALOGUE RECORD	STORYBOARD START	STORYBOARD END	ANIMATIC START	ANIMATIC END	SEC.	FR.	NOTES
		SCHEDULED												
		ACTUAL												
		OFFSET (+/-)												
		SCHEDULED												
		ACTUAL												
		OFFSET (+/-)												
		SCHEDULED												
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Figure 11-1 Generic pre-production macro tracking chart.

Depending on the individual elements that require monitoring, a multitude of steps require micro reports. APMs/PDMs and coordinators usually create and update these charts when they are assigned to the specific departments and are responsible for tracking the details of what is being completed, when and by whom. Figure 11-2 is an example of a micro chart that can be used to track design elements such as character assets, location assets, and props through modeling and rigging. The information on these charts should be linked to the files that the artists can access so that applicable production notes and directorial comments are available at all times.

Critical to keeping production on track from the beginning is setting up alert systems to communicate asset revisions. The tracking system can be configured to tag specific information so that when an update is made that pertains to a given series of shots, all individuals whose work is related to that particular element are immediately made aware of the change. This kind of automated information dissemination allows the team to be more in sync and to avoid wasting precious time. At the same time, when production accounting is directly connected to the tracking system, the producer can request a tally for the approximate cost of a revision and assess its financial impact.

Production

With the sheer magnitude of all that needs to get accomplished during production, it is easy for a shot to get lost in the shuffle. The tracking system therefore functions as a check-and-balance for the show, ensuring that everything is in place, accounted for, and most important, in progress.

It is vital to chronicle a shot's path from its initial entry into the editorial draft and to follow it as it enters the production stream, tracking it as it goes through each department and is assigned, completed, revised, or approved for the next phase. Because so many staff members work on a given shot, the tracking system should provide the management team with "live" shot location and status information. Additionally, tracking provides a record of each artist's actual output and assists with inter-departmental and intra-departmental quota planning.

Generating a weekly macro report for the production stage is a great way to gain a quick overall view of a show's status. This report would reflect all of the major departments, the scheduled or projected start and end dates, their actual start and end dates, and the percentage of work completed in each area. When a particular department is ahead or behind schedule, the difference between the expected goal versus the actual work completed is shown. This number, also referred to as an "offset," tells the

ASSET NAME	DESCRIPTION	ASSET ID	CURRENT STATUS	ARTIST		DESIGN		MODELING		RIGGING	
						START	END	START	END	START	END
					SCHEDULED						
					ACTUAL						
					OFFSET (+/-)						
					SCHEDULED						
					ACTUAL						
					OFFSET (+/-)						
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					ACTUAL						
					OFFSET (+/-)						

Figure 11-2 Generic pre-production micro tracking chart.

producer and buyer/executive how successfully the show is progressing. When the numbers fall short, the producer can detect where obstacles may be in the production path, based on the offset number shown for each individual department. See Figure 11-3 for reference.

Questions to ask when analyzing the chart include: *Is there enough inventory available for the department? Are there any "on-hold" shots that count as inventory in a given department, but actually can't be worked on due to script revisions, for example? Are all artists aware of the needed output,? Are the quotas realistic and achievable?* Finding answers to questions such as these and fixing the problems as early as possible is vital. By detecting the weak links right from the start, the producer can control the show. On a micro level, he or she can avoid poor weekly performance; on a macro level, the producer can stop the production quality from slipping.

Tracking the status of individual shots is integral to assessing the project's progression. The evolution of a shot from its inception through final color is illustrated in Figure 11-4. The chart tracks the shot's key information, including the name of the artist presently working on the shot, the assignment date, and its due date. Dates and any applicable notes are entered on the tracking system as the shot gets completed in one department and is sent to the next. The production management team is responsible for entering and maintaining this data in collaboration with the artists. This record of information allows the management team to sort specific fields such as "approved shots" and determine how much work has been completed. When this type of data is linked to the initial budget and the projected weekly cost for each department, the production accountant can evaluate each department's output and work inventory and provide the producer with an accurate cost report. This data generated by the accounting department is highly critical information for the producer in terms of how to navigate the production at hand and when he or she has to create budgets for future projects. Although every production will have its own unique requirements, drawing upon the studio's accumulative experience allows the producer to generate more accurate budgets.

The information on the production tracking system is essential to managing a project; it is also a perfect communication tool for sharing shot details with the artistic and technical crew. Figure 11-5 is a shot breakdown chart from *Luna*. It illustrates the creative technical requirements for shot Luna 04_710. It is a consolidated snapshot of all key items for the artists to consider with regard to animation, effects, and lighting. During the brain trust phase (see Chapter 9, "Production," for details), the director articulates his or her specific vision for each shot and the department

TITLE:
PRODUCTION NUMBER:
PRODUCTION STATUS REPORT FOR WEEK ENDING:
CURRENT PRODUCTION WEEK NUMBER:
NUMBER OF WEEKS LEFT:
TOTAL NUMBER OF MIN./SEC./FRAMES COMPLETED:
TOTAL NUMBER OF MIN./SEC./FRAMES TO COMPLETE:
TOTAL ON HOLD:

	QUOTA THIS WEEK	ACTUAL THIS WEEK	OFFSET (+/-)	QUOTA NEXT WEEK	WORKABLE INVENTORY	EXPECTED NEXT WEEK	TOTAL ACTUAL TO DATE	TOTAL QUOTA TO DATE	TOTAL OFFSET (+/-)
SHOT ISSUE									
LAYOUT									
SHOT SETUP									
ANIMATION									
CHARACTER FINALING									
FINAL LAYOUT / SET DRESSING									
EFFECTS									
MATTE PAINTING									
LIGHTING / COMPOSITING									
FINAL OUTPUT									

Figure 11-3 Generic production macro tracking chart.

SEQ.	SHOT CODE	SHOT LENGTH		LAYOUT	SHOT SETUP	ANIMATION	CHARACTER FINALING	FINAL LAYOUT	EFFECTS	MATTE PAINTING	LIGHTING & COMPOSITING
			DATE IN								
			ARTIST								
			DATE SCHED.								
			DATE ACTUAL								
			OFFSET (+/-)								
			DATE IN								
			ARTIST								
			DATE SCHED.								
			DATE ACTUAL								
			OFFSET (+/-)								
			DATE IN								
			ARTIST								
			DATE SCHED.								
			DATE ACTUAL								
			OFFSET (+/-)								
			DATE IN								
			ARTIST								
			DATE SCHED.								
			DATE ACTUAL								
			OFFSET (+/-)								
			DATE IN								
			ARTIST								
			DATE SCHED.								
			DATE ACTUAL								
			OFFSET (+/-)								
			DATE IN								
			ARTIST								
			DATE SCHED.								
			DATE ACTUAL								
			OFFSET (+/-)								
			DATE IN								
			ARTIST								
			DATE SCHED.								
			DATE ACTUAL								
			OFFSET (+/-)								

Figure 11-4 Generic production micro tracking chart.

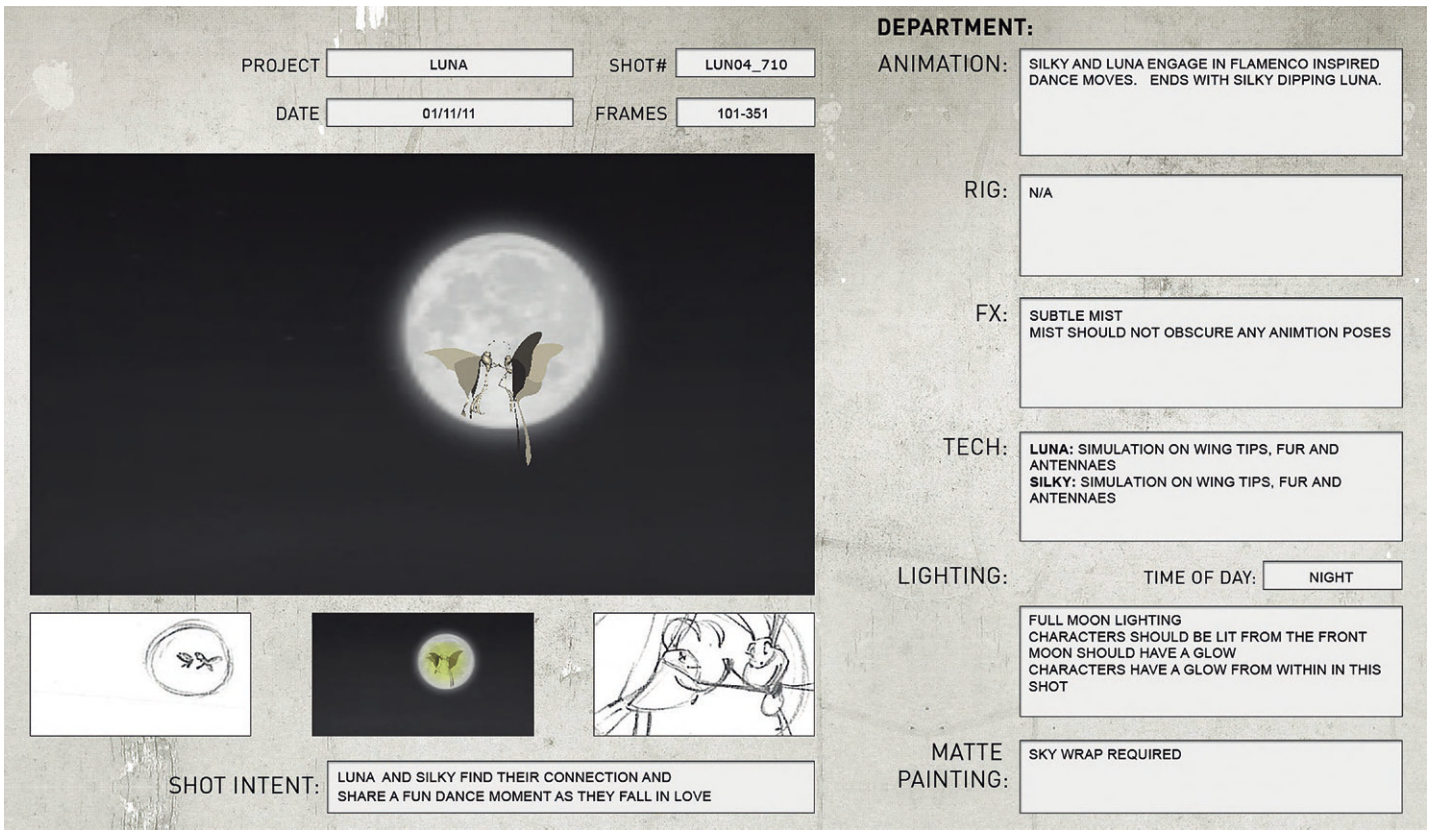


Figure 11-5 Shot breakdown chart for *Luna* 04_710.

leads discuss how to best implement the director's objectives. This information is then placed on the shot breakdown chart and is maintained and updated as the shot progresses down the production pipeline. This template is highly useful for both in-house feature productions and projects that are sent to subcontracting studios.

Tracking Subcontractors

For projects that are sent to subcontractors, it may be possible to integrate the domestic studio's production tracking system and/or to set up online file sharing protocols. Having a web-based shared tracking system with the subcontracting studio can have numerous advantages, including a more efficient means of communication and sharing of production data. Depending on how the reporting system is set up, it is important that the producer receive a weekly production report. If a project is in trouble, it may be necessary to receive more detailed information on a daily basis, which can be easily accomplished through the shared tracking system or through requesting specific reports. However, once the project has been outsourced, the producer typically has access to only a macro perspective and must rely on the subcontracting studio for tracking the production minutia. The chart in Figure 11-6 provides an example of the production tracking information as generated by the subcontractor. This template can be used to illustrate the progression of a television episode as it starts in the animation department and proceeds all the way through compositing and delivery. Because there are always multiple episodes going through the pipeline, this chart reflects how the productions will overlap and indicates their current level of completion on a weekly basis.

Tracking Retakes

It is important to track the status of each and every retake so that no shots are missing and no incorrect elements are included in the final color images. This process can be very time-consuming and requires the documentation of a significant amount of detail on the tracking system. The specific information noted for the retake must be concise and clear as to exactly what elements require a redo.

The retake report includes:

- The episode or sequence number
- The act number or the reel number
- The shot number
- A clear explanation of the problem, noting the frame numbers when applicable
- Scheduled due dates for review

TELEVISION SERIES TITLE:

EPISODES: 1 - 6

CURRENT WEEK NUMBER:

TOTAL NUMBER OF WEEKS LEFT:

DATE:

ANIMATION	EPISODE 1		EPISODE 2		EPISODE 3		EPISODE 4		EPISODE 5		EPISODE 6	
	START	DUE	START	DUE	START	DUE	START	DUE	START	DUE	START	DUE
SCHEDULED												
ACTUAL												
% COMPLETED												
OFFSET (+/-)												
COMMENTS:												

BG PAINTING	EPISODE 1		EPISODE 2		EPISODE 3		EPISODE 4		EPISODE 5		EPISODE 6	
	START	DUE	START	DUE	START	DUE	START	DUE	START	DUE	START	DUE
SCHEDULED												
ACTUAL												
% COMPLETED												
OFFSET (+/-)												
COMMENTS:												

CLEANUP ANIMATION	EPISODE 1		EPISODE 2		EPISODE 3		EPISODE 4		EPISODE 5		EPISODE 6	
	START	DUE	START	DUE	START	DUE	START	DUE	START	DUE	START	DUE
SCHEDULED												
ACTUAL												
% COMPLETED												
OFFSET (+/-)												
COMMENTS:												

INK & PAINT	EPISODE 1		EPISODE 2		EPISODE 3		EPISODE 4		EPISODE 5		EPISODE 6	
	START	DUE	START	DUE	START	DUE	START	DUE	START	DUE	START	DUE
SCHEDULED												
ACTUAL												
% COMPLETED												
OFFSET (+/-)												
COMMENTS:												

COMPOSITING & DELIVERY	EPISODE 1		EPISODE 2		EPISODE 3		EPISODE 4		EPISODE 5		EPISODE 6	
	START	DUE	START	DUE	START	DUE	START	DUE	START	DUE	START	DUE
SCHEDULED												
ACTUAL												
% COMPLETED												
OFFSET (+/-)												
COMMENTS:												

GENERAL COMMENTS:

Figure 11-6 Generic subcontractor tracking chart.

When this information is tracked, it summarizes the number of shots per episode/sequence that are in different stages of revision, or "takes." It gives the producer a quick look at the project's overall status. It can also be a useful tool to evaluate the quality of work provided by a subcontractor based on the amount of retakes needed per show. It is necessary to keep track of the status of each individual shot's expected completion date in order to make sure that all retakes will be sent back and approved in time for picture lock.

Post-production

During post-production, the producer tracks and compares actual dates with the scheduled dates to assess the status of the project. The chart in Figure 11-7 outlines the steps required for delivery on film and digital format for theatrical productions.

Most feature projects have multiple deliverables and should be made available for both film and digital distribution and presentation. Television shows are typically completed and delivered as digital files or on tape. Figure 11-8 tracks the various stages needed for this format. Final videotape masters and an element reel are required for final delivery and archiving. (For detailed information on post-production steps, see Chapter 10, "Post-production.")

Talking Beyond the Tracking

The most important point to keep in mind when tracking a production is accuracy, because if production tracking is inaccurate, a project can become completely unglued. From a general perspective, however, tracking is just one mode of communication on a show, and clear communication is key to a production's success on every level.

Artwork for Ancillary Groups

The production tracking system is an indispensible tool for facilitating the artwork needs for all ancillary groups that play a major part in promoting and selling products related to the project. For feature films that are considered a mainstream theatrical release, there can easily be as many as a hundred external companies that require artwork in order to fulfill their part of the merchandizing lineup. The vendors range from companies hired to create the accompanying interactive game to the book, toy, clothing, and accessory lines. By allowing controlled access to content that is specifically created for this purpose, the producer

SOUND	SONG RECORD (if applicable)	SOUND SPOTTING	MUSIC SPOTTING	LOCK PICTURE	RECORD SCORE	MUSIC MIX	ADR RECORD	FOLEY RECORD	FX PRE-MIX	FOLEY PRE-MIX	MUSIC PRE-MIX	DIALOGUE PRE-MIX	FINAL MIX
SCHEDULED													
ACTUAL													

PICTURE	CONFORM	CONVERGENCE (if applicable)	DIGITAL GRADING	CREDITS MAIN & END	DIGITAL MASTER CINEMA	DIGITAL CINEMA PACKAGE	FINAL QUALITY CONTROL	DELIVERY
SCHEDULED								
ACTUAL								

FILM RECORD	ANSWER PRINT	INTER-POSITIVE	INTER-NEGATIVE	FINAL QUALITY CONTROL	RELEASE PRINT	DELIVERY

Figure 11-7 Generic post-production tracking chart: film and digital cinema package delivery.

EPISODE NUMBER		PICTURE ASSEMBLY	TAKE 1	TAKE 2	LEGAL REVIEW	LOCK PICTURE	SOUND SPOTTING	MUSIC SPOTTING	CONFORM	GRADING	CREDITS	FINAL MIX	M & E	FINAL MASTER	QUALITY CONTROL	CLOSED CAPTIONS FOREIGN LANGUAGE DUBBING TEXTLESS ELEMENTS	DELIVERY
	SCHEDULE																
	ACTUAL																
	SCHEDULE																
	ACTUAL																
	SCHEDULE																
	ACTUAL																
	SCHEDULE																
	ACTUAL																
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Figure 11-8 Generic post-production tracking chart: videotape delivery.

Communication Is Key

Jinko Gotoh, Producer

I've been called "Ms. Wolf," "The Cleaner," and an "Administrative Vulture," just to name a few of the colorful unofficial titles in my past. That's because on many occasions I've been asked to rescue or reorganize distressed productions. The reasons these shows become distressed are many, but I have found that they usually involve a lack of communication, or some form of miscommunication at the very least.

Animation is a very long, rather slow process: I always tell people that if you've never worked on an animated feature, on one hand, it's like watching paint dry. On the other hand, when the production has gone awry (when I'm called onto a set), it often feels like the crew is being engulfed in the quicksand of a bottomless money pit, surrounded by a lot of pointing fingers, yelling, crying, and other interpersonal drama.

If a production is properly monitored and managed on a week-to-week basis, most "quicksand" situations are avoidable. But what is not trackable on quota charts and production calendars is the effectiveness of communication among people up and down the crew list. Bottom line: if the communication isn't working between all parties, the movie will ultimately suffer creatively; there will be delays, and the project will go over budget. With that in mind, here are some classic situations that can happen on animated projects, especially with first-timers, in which proper communication is key to climbing out of the quicksand:

- The story is not working but the show is in production. If a choice is made to start prior to a solid script being ready, make sure that everyone is aware of the risks they are taking. Suffering from full-on denial, I've heard, "Don't worry. We can fix it in animation." Or "It'll be fine when you see it in color." Communicate to all people involved that this is just impossible without incurring significant costs.
- The complexity and scale of the work and/or the process has been underestimated. If this happens, everyone needs to stop and discuss options to pull back on the complexity and ensure that the production can get back on track before it is too late. Never believe the talk that "We can fix it in the next department" or "We can catch up on our schedule down the line."
- Poor or inaccurate production reports. Communicating the status of a project and projecting ahead with regard to potential delays is key to success. Make sure to have a strong system that ensures regular reporting to everyone on the team so they know what is happening.
- Bad chemistry exists between key personnel. When conflict arises at the senior level, the crew morale suffers greatly, like a family beleaguered by a bad marriage: it's hard to sustain positive energy day-in and day-out, and ultimately, this negativity will be reflected in the end product. Although it is expected that a certain amount of friction will exist among strong personalities in a creative environment, it's important to deal with interpersonal conflict sooner rather than later. In most cases, the director or producer is not going to get fired, and studio executives aren't going away, and in the interest of making a successful animated project, everyone needs to learn how to get along.

To avoid these pitfalls, it's simply important for everyone to communicate clearly and honestly. Know that fear often prevents proper communication, but realize that delaying bad news only makes a situation worse. Animation production has an assembly line component to it. It's like making widgets, and if you are making the faulty widgets, the sooner in the assembly line you fix the problem, the better. Otherwise you will have a lot of expensive and unusable widgets—nothing worth showing on the screen at the end of the line.

can avoid work duplication, save time, and most important, maintain quality control. (See Chapter 12, "Distribution, Marketing, Licensing, and More," for more details on ancillary needs.)

Archiving of Digital Content

Once a project has been delivered, all content must be organized and archived for future reuse or reference purposes. Because the tracking system is set up to house the production files from their inception and through the course of the project, it can now be used for storage. Because each asset has its own specific coding, there is an inherent classification system that allows all material to be easily retrievable.

12

DISTRIBUTION, MARKETING, LICENSING, AND MORE

It's difficult enough to have to juggle everything from schedule to budget to talent, but the animation producer has the added challenge of doing all that while trying to answer these questions in the middle of the production process as well:

Who is the ideal distribution partner, if there isn't one already in place?

What is the best exhibition roll-out strategy?

What kind of marketing plans should be devised to build brand awareness?

What are possible ancillary revenue streams?

What promotional opportunities are there?

These questions will have different answers depending upon many factors including the target audience, the release date, and talent attached. Although dedicating time and resources to some of these elements may seem like a distraction to reaching the end goal of having a finished feature film or television series, it is critical that a producer plan for and accommodate these efforts, as they are vital to a project's financial success and its longevity in the marketplace. With that in mind, the following topics should be on the list of a producer's "things to do" for launching his or her project in the public arena.

Distribution

First and foremost, a project requires that some form of distribution deal be in place prior to its completion. It is not always necessary to have this relationship structured from the onset; however, the sooner the better, as it is very important that the distributor feels invested in the project and therefore motivated to support its successful launch in the marketplace. By either hiring or partnering with a distributor, you can work together to craft a customized marketing plan and devise distribution strategies to hone in on your target audience.

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When searching for distributors, a producer needs to make both domestic and international deals. Finding a U.S. distributor is typically the most critical relationship to put into place. It can be the key to completing the financing of a project. Foreign sales are also very important; depending on your production partners and content, these deals may be made first. For independent producers, presales in foreign territories are a pivotal source of revenue to potentially jump-start the production. Besides financial support, adding the expertise of a distributor into the mix early can help generate the type of awareness that will maximize the film's box office return. Solid ticket sales in turn translate to how profitable a project can be based on potential ancillary revenue streams such as Blu-ray/DVD format; broadcasting on cable and network television; airing through pay-per-view (PPV) and video-on-demand (VOD); and viewing on current and future digital platforms.

The form of partnership and methodology of distribution vary widely based on the type of content and format of the project. If you are working on a feature film, having a distribution partner well-versed in animated film marketing lined up is almost always necessary in order to secure financial resources and support for the project's completion through post-production. If it is a television project, anything beyond a pilot episode will likely need a broadcast partner in place for the same reasons. Shorts or webisode distribution may be sorted out later in the life of such a project, as there are more accessible, "viral" means of releasing such properties into the hands of the public. In the case of a project that is made up of multiple investors, one key stipulation may be that production funds will not be released until the producer can provide a signed agreement with an established distributor. Whatever the plan, a marketing and release strategy needs to be thought through with these partners. Overseeing that the strategizing is happening in a focused and innovative way is often the job of the producer and/or executives assigned to a project. Depending on the size of the distributor, there may be many projects they are focused on. It is the producer's job to ensure that his or her project stands out in the crowd by keeping all key stakeholders enthusiastic about its potential.

Identifying the right distributor is key to a show's success. It is the producer's responsibility to make sure this partner is familiar with the type of content being produced and that they have a history of successfully marketing it. In order to determine whether they will take on a project, a distribution partner evaluates the risk involved with the property. They will build a financial model of a project, outlining estimated revenue streams and costs based on comps and other industry-based assessments. This information will be then used to run various scenarios based on projected low, medium, and high success rates for the project. The model

involves considerations for revenue opportunities, both domestic and international, such as the theatrical release; nontheatrical releases (airlines, military bases, cruise ships); home entertainment (VOD/Blu-ray/DVD); television (network, paid TV, PPV, and syndication); digital dowload and merchandising. The model also looks at costs associated with releasing the project, such as marketing, and prints and advertising (also known as P&A, to be discussed later in this chapter). If these elements all work together to create a mutually beneficial financial relationship for both parties, then a deal can be made.

There are a number of different types of distribution agreements. The most integrated relationship involves a partnership commencing during the development phase or in early preproduction. In this scenario, the distribution partner sets up the project *in-house*, provides almost all of the financial support, and has the right to final approval during production. On the opposite side of the spectrum, a project can find distribution under an *acquisition* deal, which means the producer delivers a finished project to its distribution partner for a negotiated price, with or without profit sharing. The distributor charges a fee for marketing and distribution costs. There is little or no profit sharing expected beyond the run of distribution term negotiated. In this case, the amount of money invested by the distributor is typically significantly less. Somewhere in between these two types of agreements is a deal called a *negative pickup*. In this type of relationship, the distributing partner may or may not have creative input into the project, depending on the size of their investment and the project's status in production. The distributor may agree to give the producer an advance of his or her share of the projected profit, which can help a producer pay off his or her investors and production costs without having to wait for actual box office revenue and subsequent calculations to be made. In all deals, the producer needs to negotiate a predetermined number of territories, screens, or appropriate outlets, ensuring that the project is launched as widely as possible in the marketplace.

An extremely important factor to consider when putting a deal into place with a distribution partner is the ownership of rights. Larger studios and distribution companies tend to absorb major, if not all, rights to a project; smaller companies are generally willing to negotiate with filmmakers, ultimately allowing a producer to have more control over their work and the life of the project beyond the initial release of the film or launch of the show. Details such as "Who has the right to make sequels?" or "Who has the right to make new animated projects or seek other commercial opportunities with the characters?" are both important points to cover. Another scenario to consider is if a project does not test well in early focus groups or does not have

a stellar opening weekend or premiere episode, the rights owner can decide to pull financial support for the project immediately, shelving it from further exposure or even completion. If the producer/filmmaker maintains the rights, he or she is more likely to want to keep seeking an audience, to pursue alternate routes of distribution and other opportunities for the project, and to not "give up" on it immediately.

Partnering with your distributor to choose a release date is incredibly important to a project's success. Finding a date that allows the property to rise above its competitors is an art, especially in the feature film market. A film's success is highly dependent on the weekend it opens. The opening weekend will give all involved an immediate insight into the property's future revenue streams. As the marketplace in animation is becoming more and more crowded, picking a launch weekend that connects to the target audience's viewing habits and ensures that there is little or no competition is key. An example of this is if the film is a big family movie, then the prime weekends to "own" are long holiday weekends. Often for any format, this date may be determined as the project gets greenlit, which ultimately becomes the driving force for dictating the pace of the production schedule. Most animated feature projects have their release date predetermined years in advance of their completion.

Prints and Advertising

It is important to determine how many and in what format the final masters are to be delivered to the buyer. For feature films, this cost can be significant, depending on the release strategy, and can greatly affect the post-production budget. With that said, these costs have begun to decrease over the last few years as digital releases have become more commonplace. Once digital distribution becomes the norm, these costs will become less and less critical for the producer to factor in.

When making a deal with a distributor, it is critical that a minimum amount of allowance for prints and advertising (P&A) be agreed upon up front. These monies will be key to developing a marketing strategy. The amount of funds devoted to P&A on a film has a direct influence on its initial brand awareness in the theatrical window. The distributor can determine the appropriate number of screens for the opening weekend based on the monies set aside for this purpose. For independent film projects, when making a deal with the distributor, the producer must typically be in a position to guarantee a specific dollar amount to be allocated for P&A or the distributor is not likely to consider the partnership.

The Impact of the Interweb

Evan Spiridellis, Co-Founder, JibJab

The web is an artist's dream. For the first time in history, an individual creator can produce and distribute his or her work to a worldwide audience without anyone telling him or her what to do or what to change. On the flip side, there is still not an established business model that easily enables a content producer to monetize his or her hard work. As a studio that creates content specifically for online audiences, the trick is finding the balance between giving it all away and compensating for the true costs of production—while hopefully turning a profit!

Since we started JibJab in 1999, we've gone through a few business models and have constantly been forced to be creative about potential business opportunities. From our first buzz-worthy piece, George W. Bush and Al Gore's rap battle "Capitol III," we established ourselves as a studio that produces short-form political satires for the Web. We call those two-minute shorts our tent-pole productions, and they are fairly epic for a small studio to pull off. They take the whole team to produce and they get a lot of thought, energy, and money poured into them. The benefit of producing these pieces is that we get a ton of press and exposure. We'll typically get about four or five million views online in the first month after a release; our latest video landed us on CNN, Fox News, MSNBC, and in the *New York Times*, as well as a host of other media outlets. Even though we can justify the tent-poles as a marketing expense, the reality is that they do not generate any revenue.

What does create revenue and enables us to produce and control our content is our subscription-based business model. It was actually my brother Gregg's brilliant idea to launch an e-card business after studying the impressive income generated by the major greeting card companies online. We looked at the medium and saw that audiences were paying for what was primarily subpar animated content and realized that our skills could easily be applied to that market. In the three years since we launched our e-card line, we have created more than 1,500 pieces of occasion-based videos and stills. There is always a free offering on the site, but for just $12 a year, people get unlimited access to our complete library. JibJab is now a 40-person company, which—between payroll and overhead—makes it a relatively expensive business to run. The beauty of our subscription business is that it has allowed us to walk away from a strict focus on advertising. This is the way most other online entertainment companies cover their costs, but as a creator, the problem with being dependent on advertising is that you essentially have two parties you need to please—the first is your audience and the second is the companies that pay you. If you want premium advertising on your site, you have to be very careful about what you say and how you say it. Creatively, this can be a huge limitation. On the flip side, if you don't care who advertises on your site, then you run the risk of creating a *really* unattractive experience for your users. At JibJab, our primary goals have always been to make our audience laugh and to provide them with the highest-quality experience possible. To be true to our brand, our fans and our customers, we decided it was best to leave the ad money on the table and focus on our audience.

Figure 12-1 JibJab Logo (JibJab® is a trademark of JibJab Media Inc. in the United States and other countries).



It's been 11 years since we started JibJab, and we've been through a few boom and bust periods, but the best part about producing and distributing our work online is the personal and professional satisfaction of creating great content and being able to share it with the world on our own terms. All that is courtesy of the amazing technology we call the Interweb!

Animation Festivals

With or without a distribution partner, a project might seek a life on the animation festival circuit. Screening a project in the festival circuit can create excitement around its content and build industry awareness. This form of exposure may lead to possible acquisition or partnership with a distributor, if such details are not already in place. Although there are certainly costs associated with accompanying a project around the globe to renowned festivals such as Annecy and Melbourne, such events offer valuable international exposure for talent or studios seeking future project co-production partnerships. There are also many notable North America–based events such as the Ottawa Animation Festival, KidScreen in New York, or the traveling Spike & Mike's Sick & Twisted Festival of Animation.

Marketing

Be prepared to be avalanched by requests for artwork and other information from the ancillary groups, specifically marketing. The marketing of a project begins much before its release or airdate. When it comes to showcasing the final content, the strategy should be multifaceted and cross multiple platforms in order to cut through and stand out against the competition. In some scenarios, marketing funds can match or exceed production funds, so it behooves the producer to expend a good amount of effort and energy to ensure that the marketing campaigns have ample support from the production on all fronts.

A successful marketing plan is innovative and creative. It should have an overarching strategy that combines any licensing and ancillary revenue projects with a targeted publicity campaign. There are some basic elements that should be planned for, such as the creation of a teaser or trailer, the pitching of publicity campaigns, the development of an online presence, and the establishment of promotional partners.

Trailers/Teasers

Long before a project is finished, the need to create a teaser or trailer arises. To that end, it is wise to take a moment early in production to call out key shots or "rushes" that would be crucial to use in such a piece, prioritizing them and putting them on a fast track through the production pipeline. Although the production crew may have a good sense of what would be key shots, it is always recommended to have the project's marketing consultant

or studio's marketing department involved in the selection process. Making a rough cut of the trailer using storyboards or rough animation can be a good way to preview the selections and make sure they play well together and are worth the "rush" treatment.

If the trailer is to be shown in a stereoscopic format, care should be taken to respect 3D viewing concerns when editing such material. For example, fast cutting—which is normal for trailer visual logic—does not play well in the stereoscopic format because it does not give the viewer's eye time to adjust and follow the images with clarity.

Publicity

Hype, buzz, publicity—whatever you call it, it is an important part of building awareness and excitement for a project. The publicity campaign should be well thought out and should build on the momentum as a project gets closer to its release date. Depending on the size and scope of a project, it may require that a producer and director go on a road show to sell the content to audiences all over the world. There are other reasons, however, to consider starting a campaign early on in a project's life. Having the industry talk about your project as it is ramping up production makes it a sought-after property to work on, which may attract more talented artists or voice actors to become a part of it. That participation, in turn, can provide ample fodder for release publicity efforts, announcing how the collaboration of the talented cast and crew has culminated in such a wonderful final result. Natural opportunities to pitch press/bloggers to mention your project come when key talent signs deals, studio/distribution relationships are established, and of course, upon release of the project. In order to get maximum coverage, the producer should acquire the services of an experienced animation industry publicist. The publicist will draw upon his or her well-established relationships with the media and utilize contacts to provide optimal exposure for the project.

To support publicity efforts, a project should have a fully developed press kit. A producer will need to be prepared to support the publicity team in pulling together the following types of materials:

- Images:
 - Key stills from the project
 - Headshots of principal cast and crew members
- Filmed Pieces (often referred to as the electronic press kit or EPK):
 - Interviews with principal cast and crew members

 - Behind-the-scenes footage of artists working
 - "How'd they do that?" segments and other special featurettes
- Written materials:
 - Synopsis of the project
 - Running time
 - Complete cast and crew lists
 - Biographies of the principal cast and crew members
 - Production notes, covering such topics as:
 - Underlying work (original screenplay, book, etc.)
 - Places where the crew went for research
 - Information about the studio where the picture was produced and anecdotes about the background of the story or production

Online Presence

With the importance and relevance of the Internet in today's society, there are an unlimited number of ways to market an animated project using this valuable mode of communication. In the following sections, some of the key tools to consider are described.

Website

Creating a dedicated website is the first step the producer must take to introduce his or her project to the public. For relatively little investment, a site can be built to feature still images, video clips, and written materials such as a synopsis and character descriptions. More advanced sites may also offer downloadable items such as computer desktop wallpaper, icons, and other digital materials. Projects that target younger audiences may feature custom games and other activities such as digital art projects and educational programs to enhance the viewers' experience and deepen their relationship with the project's characters.

The information gathered by having site visitors register in order to access these activities can also be very helpful to a producer. Details such as the online visitors' gender, age, and usage patterns can serve as guidelines regarding which aspect of the project creates the largest interest and for whom. This type of information is similar to that found via focus group research, but can be acquired in a far more casual and less expensive manner.

Social Media

Online social media can be a tremendous marketing tool for the producer. The most valuable opportunity that social media

offers is the means for the awareness for your project to go "viral," meaning that supporters start sharing their enthusiasm with others—a process in which the individual fan becomes the media, spreading the word even further, literally serving as a network of "grassroots promoters."

You can create a presence for your project on numerous online communities with little or no cost involved. On social media sites, a producer can create fan pages for projects or characters within a project. Beginning early in development, he or she can make announcements about the status of the project, noting milestone achievements and sharing early artwork to create a buzz. Tracking the patterns of the visitors to the website and gauging their excitement and dialogue about development art and story ideas may actually serve as informal research that can help a project. For example, if fans respond strongly to one character, that character may deserve a bigger role in the project than a producer may have considered, or perhaps a particular story point may prove to be an intriguing angle for how to advertise the project.

Later in the life of a project, the pages can be used to invite fans to attend special events, watch TV appearances, or answer trivia questions about the show. Opportunities to create an interaction that makes the project that much more real and relatable are endless. As mentioned with regard to the dedicated website, social media sites collect and provide visitor's demographic details to interested parties, which can also help a producer target other site users that seem like an appropriate match for a project by "suggesting" they visit your page(s), an approach comparable to a well-defined "direct mail" piece of advertising.

Promotional Partnerships

Establishing relationships with promotional partners is a great way to market a property. With that said, this type of arrangement is usually structured on bigger budgeted projects and is very competitive to get, as the investment of the promotional partner onto a project can be significant. A producer (or his or her marketing group) must pitch the project to potential partners long in advance of the completion of the project to garner their interest, find space on their promotional calendars, and generate any materials needed to support the relationship. When done well, these types of partnerships broaden the brand recognition and audience awareness of a project in a number of ways. A promotional partner may incorporate a project's logo or characters onto product packaging, such as cereal boxes, school supplies, or even tubes of toothpaste. They may produce toys to be

packaged with kids' meals at major restaurant chains, with further exposure for the characters when they appear in television commercials advertising the kids' meal special promotion. They may offer opportunities for producers to give away items (such as CDs, stickers, and postcards) through radio, television, or online contests, or perhaps they will allow costume characters to have a presence and interact with fans at live special events.

Licensing/Merchandising

Licensed products are ultimately helpful in providing an awareness for a property and ensuring its successful and ongoing presence in the marketplace. Items that can help bolster the case for making a particular feature or series include a potentially successful toy line, soundtrack, or an online game. And who doesn't want to see their characters walking around in life-size costumes or on the T-shirts of young and old alike? When an animated project is a hit, there can be a substantial financial upside if it has been licensed and merchandized in a strategic and timely way.

Getting a license deal on a brand new property is very challenging. The market is very competitive; there are a tremendous number of compelling character-driven projects all trying to get noticed and picked up by licensees. If it is a feature film with the support of a large studio and promotional plan behind it, a project will have an easier time getting deals made. If a television series has a season or two behind it and has a strong audience following, then it will more than likely begin to get licensing deals as well.

There are several factors to consider about your project before trying to launch a line of consumer products. First, are the characters and storyline merchandisable? This characteristic should be a natural, inherent presence in the project. A good example of that is the Disney/Pixar film *Cars*. This film property offers a great story from the outset, with beloved characters that easily match the vehicle toy play pattern. The *Cars* consumer product campaign has since resulted in one of the most lucrative toy lines, finding successful connections with both children and older collectors.

Second, is there is an emotional connection between the audience and the story and characters? If the audience develops a vested interest in a character, they are more likely to want to "own" a piece of that property and to keep that connection alive; children are often drawn to plush toys, dolls, or other related items after seeing an animated film.

Third, is there is a vision of how to create a continuous stream of content that stems from the project and can move into a spin-off life of its own? Some storylines lend themselves to a broader

world of exploration via gaming or mobile apps, keeping the property "evergreen" due to the ability for programmers to continually build and release new levels of play via the Internet. The creation of an online gaming world can give a property greater revenue potential because it can keep the brand fresh and alive for its fan base long after the initial launch. The world of apparel is another opportunity to extend the life and reach of animated characters. Some characters are popular season after season, year after year, appealing to a particular age group and gender such as the lineup of Disney princesses. The arena of publishing also offers diverse options for the expansion of a property across all types of films: the printed line could involve storybooks, coloring/activity books, novelty books, screenplay and "art of" books, as well as e-books of any of these genres.

To launch the search for licensee relationships, the producer or studio must pitch the characters and storyline to potential partners far in advance. Something to consider is that toy prototypes generally need to be produced at least one to two years before the release of a project. For this purpose, the toy company involved will require access to the project's designs and story information. Typically, most of these costs come out of the marketing budget. However, if it is determined prior to the start of production that the project will cover them, this should be budgeted. If the amount of material required is extensive, the producer may need to budget for a point person to produce materials (such as a style guide) and to coordinate the conveyance of artwork or film footage as necessary. Alternatively, an asset management system can be set up which enables multiple vendors to securely access content from the project specifically approved for their purposes. Whatever the scenario, this needs to be discussed and included within the production plan and outlined in the assumptions as to where the costs will be covered.

When it comes to creating merchandise, a producer needs to work closely with licensees. The development of all of these items takes time, effort, and most important, accurate art materials from the production in order to properly represent the property. Consumer product development needs to work on a path parallel with that of production. As a general rule, project presentations should happen 18 to 24 months in advance of release, with well-designed and enticing material to get partners excited about the property and eager to show to potential licensees. Around 18 months out, licensing deals get signed and product development begins, and that is when it is essential for the style guide to be accessible. Artwork from the project such as characters, backgrounds and logo are instrumental in inspiring products. Twelve months prior to release, properties are typically pitched to retailers by licensees and, if applicable, to the studio's consumer

products department. If there is a studio partner on the project, it is often the case that the studio will do a general property presentation and then the licensees will pitch their individual products to sell into particular departments.

The three entities behind the products—studio, licensee, and retailer—must work together to find the right balance of quality and breadth of items in the product line. They must also focus on quantity of items manufactured with thoughtful planning so that the property is neither over-exposed nor quickly sold out. The licensing agreements should clearly define the specific items, terms of creation, and territories of distribution so that everyone agrees upon how, when, and where what product will become available. Furthermore, up-front discussions should coordinate marketing plans by all three stakeholders, making sure that studio ad campaigns, licensee packaging and displays, store placement, and circular print advertising all work together to present a clear and well-timed roll-out for the property.

Other Items to Consider

Soundtrack

The release of a soundtrack may be a long, complicated, but ultimately fantastic marketing and revenue-generating element of a project, especially if the talent attached is a star vocalist, a famous rock band or composer. In the case of a soundtrack, it is the producer's role to ensure that all of the legal paperwork and contractual agreements are in place. He or she must also support the creation of artwork for the album cover as well as the delivery of the final music tracks in order to produce the album. There is great potential value attached to a soundtrack, beyond the obvious retail sales revenue opportunities: an album or single release may provide a reason to set up special promotional concerts as well as various publicity appearances by the talent. Another possible plus is that the music may garner extra attention for a project in the awards circuits.

Spin-Offs and Sequels

Future planning for most projects requires a "wait and see" mandate, depending on how they fare in their intended outlet, but it is always a good idea to think ahead to other possible extensions of the property. Prime examples of properties branching out include how *Beauty and the Beast* or *The Lion King* translated from the big screen to the Broadway stage; or how *The Simpsons* (Figure 12-2) made the leap from television series to feature film; or how *Star Wars: The Clone Wars*

(Figure 12-3) spun out of the live action *Star Wars* to become an animated movie and television series. A producer should have his or her sights set on other ways to expand the story and characters in a project. Keeping track of character or story ideas that were considered during the original development stages but did not make it to the final project may provide inspiration for other takes on your concept, because there is often a lot more creative brainstorming during the making of an animated project than can ever be possibly worked into a single episode or film.

Happily Ever After

The potential widespread appeal and longevity of an animated project is significant. Take into account a basic industry fact: even though family entertainment is the smallest segment of the market, it consistently generates the biggest revenues. Another key point to consider is that animated projects have a much longer life span than live action projects due to their cross-generational appeal in addition to the younger demographic's repeat viewing pattern. Plus, successful animated characters are highly merchandisable and sought after by licensees around the world. All of this can happen for a property as long as the story is solid, the characters are compelling, the style of animation is unique, and the project is well positioned in the marketplace.

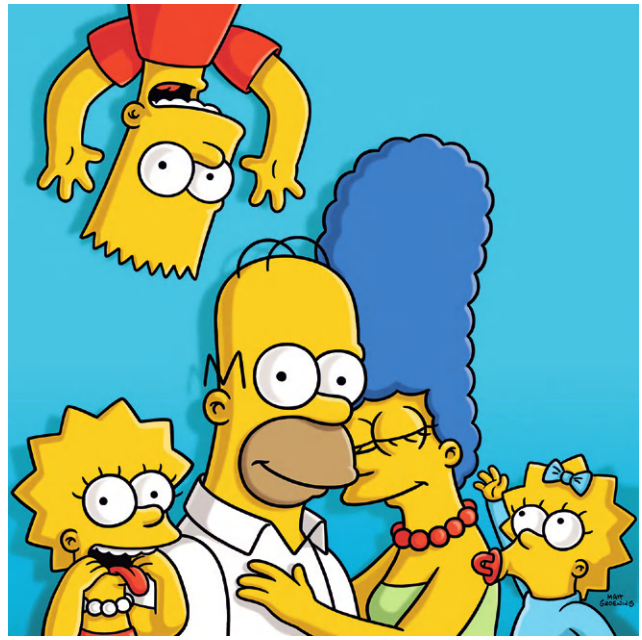


Figure 12-2 *The Simpsons* (The Simpsons © & ™ 2011 Twentieth Century Fox Television. All Rights Reserved).



Figure 12-3 Star Wars: The Clone Wars (Courtesy of Lucasfilm Ltd. Star Wars: The Clone Wars ™ & © 2011 Lucasfilm Ltd. All Rights Reserved. Used under authorization. Unauthorized duplication is a violation of applicable law).

As an animation producer, there is a lot to juggle, but the potential upside—from creative satisfaction to financial reward—is invaluable. The journey is a winding one with many ups and downs, filled with all sorts of expected and unexpected obstacles to overcome. Through each challenge, learn from your mistakes—these are gifts that help you grow as a producer. No matter how big or small, celebrate each of your successes with your team as the process is a collaborative one. And no matter what you do, have fun along the way. There is no more creative, dynamic, or exciting business to be a part of than the animation industry.

Enjoy and good luck with your endeavors!

PRODUCING ANIMATION

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Second Edition

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Focal Press is an imprint of Elsevier



Focal Press is an imprint of Elsevier
225 Wyman Street, Waltham, MA 02451, USA
The Boulevard, Langford Lane, Kidlington, Oxford, OX5 1GB, UK

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Library of Congress Cataloging-in-Publication Data

Winder, Catherine.
Producing animation / Catherine Winder and Zahra Dowlatabadi ; edited by Tracy Miller-Zarneke.—2nd ed.
p. cm.
ISBN 978-0-240-81535-0
1. Animation (Cinematography) I. Dowlatabadi, Zahra. II. Miller-Zarneke, Tracey. III. Title.
TR897.5.W65 2011
777'.7—dc23 2011017561

British Library Cataloguing-in-Publication Data

A catalogue record for this book is available from the British Library

ISBN: 978-0-240-81535-0

For information on all Focal Press publications
visit our website at www.elsevierdirect.com

Printed in China

11 12 13 14 15 5 4 3 2

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ELSEVIER BOOK AID International Sabre Foundation

For Emily, Dylan, Sophie, Joshua, and Ryan

ACKNOWLEDGMENTS

What began as a collection of our personal experience on how to produce animation—what to do and what not to do—certainly took a new direction for this edition of the book. With our industry becoming far more specialized in many areas, with a much wider reach and a plethora of possible approaches, we reached out to many friends and colleagues who were extremely generous in sharing their knowledge and time in the creation of this effort.

We would like to thank the following people for their invaluable input and help: Michael Baum, Kathy Barrows, Gina Bradley, Rob Bredow, Jamie K. Bolio, Christine Carr, Brandy Contreras, Steve Cronan, Mark Cross, Robert Crotty, Peter Del Vecho, Mark Dindal, Steve Donmyer, Neil Eskuri, Michael Garcia, Kevin Geiger, Paul Gerard, Howard Green, Andy Hendrickson, Melanie Jones, David Karoll, Heather Kenyon, Darren Kiner, Fumi Kitahara-Otto, Lori Korngiebel, Kat Kosmala, Nancy Kruse, Monica Lago-Kaytis, Angela Lepito, Dori Littell-Herrick, Kim Mackey, Maggie Malone, Peter McEvoy, Phil McNally, Dayna Meltzer, Howard Meyers, Jamie Mitchell, Robert Neuman, Ed Olson, Michelle Papandrew, Sue Perrotto, Kerry Phelan, Ashley Postlewaite, Kathleen Quaife, Kristina Reed, Dawn Rivera-Ernster, Jahmad Rollins, Jennifer Rudin, Lisa Salamone, Eugene Salandra, Maryam Sharifi, David Siegel, Kahli Small, Donna Smith, Melissa Sturm, Brett Swain, Connie Thompson, Nancy Ulene, Darrell Van Citters, Lizbeth Velasco, Anna Vocino, Michael Wigert, and Mary Ann Williams.

We extend a heartfelt thanks to our reviewers, who played a very significant part in shaping this book: Robert H. Bagley, Craig Berkey, John Donkin, Steve Goldberg, Jim Houston, Tim Jones, Mohit Kallianpur, Igor Khait, Phil Nibbelink, Kyle Odermatt, Michael Paxton, Tony Pelle, Margot Pipkin, Craig Price, and Hameed Shaukat.

We would like to express our appreciation to Allison Abbate for sharing her experience as a perfect setup for this book in her Foreword. We are extremely thankful for the time and effort put forth by those who composed sidebars for the book: Bonnie Arnold, Kirk Bodyfelt, Ellen Cockrill, John Donkin, Lala Gavgavian, Jinko Gotoh, Don Hahn, Amy Jupiter, Julie Kane-Ritsch, Igor Khait, Don Parker, Jill Sanford, Ivan Shih, Evan Spiridellis, and Irene Weibel. Additionally, we thank all individuals whom we have quoted for sharing with us their definition of what makes a good producer.

We owe our deepest gratitude to the team and artists at Rainmaker Entertainment whose work on their short film

Luna serves as our case study for this book. A special thanks to Francesca Natale for her artistic direction and character design, James Wallace and Max Wahyudi for their creation of the amazing character models, and Donna Brockropp for her many story panels and film direction. We also greatly appreciate the graphic design expertise of Shalinder Matharu, who helped create the many *Luna* layouts featured herein and the design of the website. We are grateful for the talents of Lisa Coonfer, who was responsible for the coordination of the *Luna* artwork, the many conference calls, and countless other organizational efforts required among the three of us. Thank you also to the following Rainmaker staff who helped coordinate the artwork and corresponding *Luna* website: Jongpil Choi, Candice Bone, Kimberly Dennison, Kylie Ellis, and Steph Huot.

Another round of applause goes to Wilbert Plijnaar for crafting what we consider to be the perfect design for the cover of our new edition, and to Derin Basden for applying his time and talent and creating a beautiful home for *Producing Animation* www.producinganimation.com.

I, Catherine, would like to thank my husband Craig Berkey for his consistent and unwavering support in everything I do. I would also like to thank my children, Dylan and Sophie, for all of their patience and sacrifice of precious time together that enabled me to focus on this passion project.

I, Zahra, consider myself fortunate to have such an amazing and extraordinary circle of family and friends. I would like to thank my father, Hushang Dowlatabadi, and my brother, Hadi Dowlatabadi, for their continuous cheerleading and support. Once again, my mother Mahdokht Sanati took it upon herself to do all she could to allow me to write. Words simply fail me when it comes to thanking her. I would like to acknowledge my daughter Emily for being a never-ending source of inspiration. And finally, I would like to thank my beloved husband, Jim Beihold. His love and infinite patience continue to provide me with sustenance.

I, Tracey, am grateful to Don Hahn for suggesting I become part of this project, and more important, for first opening the door into the world of animation for me. I am also deeply indebted to Mark Dindal, Randy Fullmer and all the amazing talent I have worked with in this industry for showing me what an incredible experience collaborative creativity can be. I am forever thankful for the support of my friends and family, especially my husband Mike and my boys, Joshua and Ryan, without whose love and support none of this happy adventure would be possible.

FOREWORD

When Zahra Dowlatabadi and Catherine Winder so kindly asked me to write the foreword for this edition of *Producing Animation*, I was honored, pleased…and completely snowed under with work. I didn't think I could find the time to give it proper attention. My assistant begged me not to take on another project, so I politely and regretfully declined. But then Zahra, even more sweetly, assured me that the deadline could be moved a few months, and I knew that I could not say no.

My assistant rolled her eyes and proceeded to pester me, in the nicest possible way, to clear aside some time and sit down and write it.

I, of course, procrastinated.

And then I stressed and worried but still couldn't seem to find the time to sit down and make a start. Then one day, I opened the original book again and started thumbing through the text. I re-read some excerpts that I had perused long ago when I had just finished working on *Iron Giant* and it occurred to me that this is exactly what I do everyday—it's what all producers do—they find a way to make it all fit in. The answer was in front of me the whole time, and I think it sums up why a book like this is so important. Whether you are new to the task or a wizened old hand, it's a wonderful gift to have the wealth and breadth of knowledge assembled here at your fingertips.

"The secret to Animation is making a miracle everyday." My dear friend and fellow producer, Phil Lofaro, once said this about stop motion, but it is equally appropriate for 2D and CG as well. As I have learned firsthand, stop motion animation has its own particularly exasperating challenges like weather, time, and gravity playing their mischievous parts, but anyone who has ever had a render farm crash on a Friday night or a 20-ft crowd shot to get through cleanup animation in a week will understand the significance of that sentence. It's about finding that extra hour, or extra moment of wisdom or patience to keep things moving forward.

I have had the opportunity to work with a number of amazingly talented directors and getting their unique and uncompromising visions up on the screen is always a challenge. So far I have been able to find those daily miracles. But as schedules get shorter and budgets get tighter, I for one am glad to have a book like this one to help me find new ways to fit it all in.

A big thanks to Zahra and to Catherine for the patience and tenacity it takes to bring out a second edition of *Producing Animation* (and for giving me a few extra weeks).

Allison Abbate
Producer, *Iron Giant, Corpse Bride, Fantastic Mr. Fox* and *Frankenweenie*

APPENDIX

ANIMATION RESOURCES

This appendix lists key books, journals, websites, and organizations that can be useful for the producer. It is divided into the following subcategories:

- Producer's Reference
- Art of Animation: Technique and Processes
- General Interest: History, Biography, Artists, Making of Books, and More
- Scriptwriting
- Journals, Websites, and Blogs
- Voice Casting Resources
- Key Organizations

Producer's Reference

The Animation Guild (Local 839 IATSE): Contracts and Wages
1105 N. Hollywood Way
Burbank, CA 91505
(818) 845-7500
http://animationguild.org/contracts-wages

Animation Industry Database (AWN)
http://aidb.com

Animation Magazine Industry Directory
http://www.animationmagazine.net/amid/

Hollywood Creative Directory/Hollywood Distribution Directory/ Hollywood Representation Directory/ Hollywood Music Industry Directory
5055 Wilshire Boulevard
Los Angeles, CA 90036-4396
(800) 815-0503
http://www.hcdonline.com

The Internet Movie Database (IMDb)
http://www.imdb.com

Media Law for Producers (Fourth Edition)
Philip Miller
Burlington, MA: Focal Press, 2003

The Producer's Business Handbook (Third Edition)
John J. Lee, Jr.
Burlington, MA: Focal Press, 2010

Art of Animation: Techniques and Processes

Acting for Animators, Revised Edition: A Complete Guide to Performance Animation
Ed Hooks
Portsmouth, NH: Heinemann Drama, 2003

The Alchemy of Animation: Making an Animated Film in the Modern Age
Don Hahn
New York: Disney Editions, 2008

Animated Performance
Nancy Beiman
Burlington, MA: Focal Press, 2010

Animation: From Script to Screen
Shamus Culhane
New York: St. Martin's Griffin, 1990

The Animation Book: A Complete Guide to Animated Filmmaking—From Flip-Books to Sound Cartoons to 3-D Animation
Kit Laybourne
New York: Three Rivers Press, 1998

The Animator's Survival Kit, Expanded Edition: A Manual of Methods, Principles and Formulas for Classical, Computer, Games, Stop Motion and Internet Animators
Richard Williams
London: Faber & Faber, 2009

Art in Motion, Revised Edition: Animation Aesthetics
Maureen Furniss
Sydney: John Libby Publishing, 2008

Cartoon Animation: The Collector's Series
Preston Blair
Laguna Hills, CA: Walter Foster Publishers, 1994

Character Animation Crash Course!
Eric Goldberg
Los Angeles: Silman-James Press; Paper/DVD edition, 2008

Character Animation with Direct3D
Carl Granberg
Hingham, MA: Charles River Media, 2009

Composing Pictures
Donald W. Graham
Los Angeles: Silman-James Press, 2010

Cracking Animation: The Aardman Book of 3-D Animation (Third Edition)
Peter Lord and Brian Sibley
New York: Thames & Hudson, 2010

Creating Characters with Personality: For Film, TV, Animation, Video Games and Graphic Novels
Tom Bancroft
New York: Watson-Guptill, 2006

Creating Motion Graphics with After Effects, Fifth Edition: High Impact Animation for Video and Film
Trish and Chris Meyer
Burlington, MA: Focal Press, 2010

Digital Character Animation 3
George Maestri
Indianapolis, IN: New Riders Press, 2006

Digital Lighting & Rendering (Second Edition)
Jeremy Birn
Indianapolis, IN: New Riders Press, 2006

Digital Texturing and Painting
Owen Demers
Indianapolis, IN: New Riders Press, 2001

Directing the Story: Professional Storytelling and Storyboarding Techniques for Live Action and Animation
Francis Glebas
Burlington, MA: Focal Press, 2008

Drawing the Line: The Untold Story of the Animation Unions from Bosko to Bart Simpson
Tom Sito
Lexington, KY: The University Press of Kentucky, 2006

Drawn to Life: 20 Golden Years of Disney Master Classes: Volumes 1–3: The Walt Stanchfield Lectures
Walt Stanchfield (author) and Don Hahn (editor)
Burlington, MA: Focal Press, 2009

Dreamworlds: Production Design for Animation
Hans Bacher
Burlington, MA: Focal Press, 2007

Essential LightWave v9: The Fastest and Easiest Way to Master LightWave 3D
Steve Warner, Kevin Phillips, and Timothy Albee
Sudbury, MA: Jones & Bartlett Publishers, 2007

Flash+After Effects (Second Edition)
Chris Jackson
Burlington, MA: Focal Press, 2010

Flash Cinematic Techniques: Enhancing Animated Shorts and Interactive Storytelling
Chris Jackson
Burlington, MA: Focal Press, 2010

Foundation Flash Cartoon Animation
Barry Kelly, Tim Jones, David Wolfe, and Allan Rosson
New York: Apress, 2007

Hollywood 2D Digital Animation: The New Flash Production Revolution
Sandro Corsaro and Clifford J. Parrott
Florence, KY: Course Technology PTR, 2004

How to Make Animated Films
Tony White
Burlington, MA: Focal Press, 2009

Human and Animal Locomotion (New Volumes 1 and 2)
Eadweard Muybridge
New York: Dover Publications, 1979

The Illusion of Life: Disney Animation
Frank Thomas and Ollie Johnston
New York: Disney Editions, 1995

Introducing Maya 2009
Dariush Derakhshani
Alameda, CA: Sybex, 2009

Layout and Composition for Animation
Ed Ghertner
Burlington, MA: Focal Press, 2010

Mediapedia: Creative Tools and Techniques for Camera, Computer and Beyond (Revised Edition)
Kit Laybourne
Gilbert, AZ: Knack, 2008

No Strings Attached: The Inside Story of Jim Henson's Creature Shop
Matt Bacon
New York: Macmillan, 1997

Paper Dreams: The Art & Artists of Disney Storyboards
John Canemaker
New York: Disney Editions, 1999

Prepare to Board! Creating Story and Characters for Animated Features and Shorts
Nancy Beiman
Burlington, MA: Focal Press, 2007

Stan Lee's How to Draw Comics
Stan Lee
New York: Watson-Guptill, 2010

Stop Motion: Craft Skills for Model Animation (Second Edition)
Susannah Shaw
Burlington, MA: Focal Press, 2008

Stop-Motion Filmography: A Critical Guide to 297 Features Using Puppet Animation
Neil Pettigrew
Jefferson, NC: McFarland & Co., 2007

Stop Staring: Facial Modeling and Animation Done Right
Jason Osipa
Alameda, CA: Sybex, 2010

Thinking Animation: Bridging the Gap Between 2D and CG
Angie Jones and Jamie Oliff
Florence, KY: Course Technology PTR, 2006

Timing for Animation (Second Edition)
John Halas, Harold Whitaker, and Tom Sito
Burlington, MA: Focal Press, 2009

The Vilppu Drawing Manual: Basic Figure Drawing
Glen Vilppu
Acton, CA: Vilppu Studio Press, 1997

The Visual Effects Producer: Understanding the Art of Business of VFX
Charles Finance and Susan Zwerman
Burlington, MA: Focal Press, 2010

The Visual Story Second Edition: Creating the Visual Structure of Film, TV and Digital Media
Bruce Block
Burlington, MA: Focal Press, 2007

General Interest: History, Biography, Artists, Making of Books, and More

7 Minutes: The Life and Death of the American Animated Cartoon
Norman M. Klein
New York: Verso, 1998

The 100 Greatest Looney Tunes Cartoons
Jerry Beck
San Rafael, CA: Insight Editions, 2010

500 Essential Anime Movies: The Ultimate Guide
Helen McCarthy
New York: Collins Design, 2009

Animation Art: The Early Years 1911–1953
Jeff Lotman
Atglen, PA: Schiffer, 1995

The Animation Bible: A Practical Guide to the Art of Animating from Flipbooks to Flash
Maureen Furniss
New York: Abrams, 2008

Animated Cartoons: How They Are Made and the Origin of Their Development
E. G. Lutz
Bedford, MA: Appelwood Books, 1920

The Animated Film Encyclopedia: A Complete Guide to American Shorts, Features and Sequences 1900–1979
Graham Webb
Jefferson, NC: McFarland and Co., 2011

The Anime Companion: What's Japanese in Japanese Animation?
Gilles Poitras
Berkeley, CA: Stone Bridge Press, 1999

The Anime Companion 2: More What's Japanese in Japanese Animation?
Gilles Poitras
Berkeley, CA: Stone Bridge Press, 2005

The Art and Flair of Mary Blair
John Canemaker
New York: Disney Editions, 2003

The Art and Making of Cloudy with a Chance of Meatballs
Tracey Miller-Zarneke
San Francisco: Insight Editions, 2009

The Art of How to Train Your Dragon
Tracey Miller-Zarneke
New York: Newmarket Press, 2010

The Art of The Princess and The Frog
Jeff Kurtti
San Francisco: Chronicle Books, 2009

The Art of Tangled
Jeff Kurtti
San Francisco: Chronicle Books, 2010

The Art of Toy Story 3
Charles Solomon
San Francisco: Chronicle Books, 2010

The Art of Walt Disney, from Mickey Mouse to the Magic Kingdoms (Concise Edition)
Christopher Finch
New York: Harry N. Abrams, 2004

Batman: Animated
Paul Dini and Chip Kidd
New York: Harper Entertainment, 1998

Before the Animation Begins: The Art and Lives of Disney Inspirational Sketch Artists
John Canemaker
New York: Disney Editions, 1996

Before Mickey, The Animated Film 1898–1928
Donald Crafton
Chicago: University of Chicago, 1993

Bill Peet: An Autobiography
Bill Peet
Boston: Houghton-Mifflin, 1989

Bugs Bunny: Fifty Years and Only One Grey Hare
J. Adamson
New York: H. Holt, 1991

Cartoons: One Hundred Years of Cinema Animation
Giannalberto Bendazzi
Bloomington, IN: Indiana University Press, 1999

A Cast of Friends
Bill Hanna
New York: Da Capo Press, 2000

Chuck Amuck: The Life and Times of an Animated Cartoonist
Chuck Jones
New York: Farrar Strauss Giroux, 1996

Chuck Reducks: Drawing from the Fun Side of Life
Chuck Jones
New York: Warner Books, 1996

The Cinema of Jan Svankmajer: Dark Alchemy
Peter Hames (Editor)
Brighton, UK: Wallflower Press, 2008

Disney A to Z: The Official Encyclopedia
Dave Smith
New York: Disney Editions, 2006

The Disney Films
Leonard Maltin
New York: Disney Editions, 2000

The Disney Villain
Ollie Johnston and Frank Thomas
New York: Disney Editions, 1993

Enchanted Drawings: The History of Animation
Charles Solomon
New York: Random House, 1994

The Encyclopedia of Animated Cartoons
Jeff Lenburg
New York: Checkmark Books, 2008

Felix: The Twisted Tale of the World's Most Famous Cat
John Canemaker
New York: Da Capo Press, 1996

Film Cartoons: A Guide to 20th Century American Animated Features and Shorts
Douglas McCall
Jefferson, NC: McFarland & Co., 2005

Forbidden Animation: Censored Cartoons and Blacklisted Animators
Karl F. Cohen
Jefferson, NC: McFarland & Co., 2004

From Mouse to Mermaid: The Politics of Film, Gender, and Culture
Elisabeth Bell, Linda Haas, and Laura Sells (editors)
Bloomington, IN: Indiana University Press, 2008

Good Girls and Wicked Witches: Women in Disney's Feature Animation
Amy Davis
Sydney: John Libbey Publishing, 2007

The Great Cartoon Directors
Jeff Lenburg
New York: Da Capo Press, 1993

The Hanna-Barbera Treasury: Rare Art and Mementos from Your Favorite Cartoon Classics
Jerry Beck
San Rafael, CA: Insight Editions, 2007

Hayao Miyazaki: Master of Japanese Animation
Helen McCarthy
Berkeley, CA: Stone Bridge Press, 1999

Hollywood Cartoons: American Animation in Its Golden Age
Michael Barrier
New York: Oxford University Press, 2003

Mickey Mouse
Pierre Lambert
New York: Disney Editions, 1998

My Life in Toons: From Flatbush to Bedrock in Under a Century
Joseph Barbera
Atlanta: Turner Publishing, 1994

Out of the Inkwell: Max Fleischer and the Animation Revolution
Richard Fleischer
Lexington, KY: The University Press of Kentucky, 2005

Pinocchio
Pierre Lambert
New York: Disney Editions, 1997

The Pixar Touch
David A. Price
New York: Vintage Books, 2009

The Quay Brothers: Into a Metaphysical Playroom
Suzanne Buchan
University of Minnesota Press, 2011

Secrets of Oscar-winning Animation: Behind the Scenes of 13 Classic Short Animations
Olivier Cotte
Burlington, MA: Focal Press, 2007

Simpsons World—The Ultimate Episode Guide: Seasons 1–20
Matt Groening
New York: Harper Paperbacks, 2010

Starting Point: 1979–1996
Hayao Miyazaki, Beth Cary (Translator), Frederik L. Schodt
San Francisco: VIZ Media LLC, 2009

Studio Ghibli: The Films of Hayao Miyazaki and Isao Takahata
Colin Odell and Michelle Le Blanc
London: Kamera Books, 2009

Superman: The Complete History
Les Daniels
San Francisco: Chronicle Books, 2004

Talking Animals and Other People: The Autobiography of a Legendary Animator
Shamus Culhane
New York: Da Capo Press, 1998

Television Cartoon Shows: An Illustrated Encyclopedia, 1949–2003
Hal Erickson
Jefferson, NC: McFarland & Co., 2005

Tex Avery: King of Cartoons
Joe Adamson
New York: Da Capo Press, 1985

Tex Avery: The MGM Years, 1942–1955
John Canemaker
Atlanta: Turner Publishing, 1996

That's All Folks!: The Art of Warner Bros. Animation
Steve Schneider
New York: H. Holt, 1999

Toy Story: The Art and Making of the Animated Film
John Lasseter and Steve Daly
New York: Disney Editions, 2009

Two Guys Named Joe: Master Animation Storytellers Joe Grant & Joe Ranft
John Canemaker
New York: Disney Editions, 2010

Walt Disney Animation Studios—The Archive Series: Animation
New York: Disney Editions, 2009

Walt Disney Animation Studios—The Archive Series: Design
New York: Disney Editions, 2010

Walt Disney Animation Studios—The Archive Series: Story
New York: Disney Editions, 2008

Walt Disney and Europe
Robin Allan
Bloomington, IN: Indiana University Press, 1999

Walt Disney's Fantasia
John Culhane
New York: Abradale Press/Harry N. Abrams, Inc., 1983

Walt Disney's Nine Old Men and the Art of Animation
John Canemaker
New York: Disney Editions, 2001

Walt Disney's Snow White and the Seven Dwarfs & The Making of the Classic Film
Richard Hollis and Brian Sibley
London: Deutsch, 1994

Winsor McCay: His Life and Art
John Canemaker
New York: Harry N. Abrams, Inc., 2005

Scriptwriting

Animation Writing and Development: From Script Development to Pitch
Jean Ann Wright
Burlington, MA: Focal Press, 2005

How to Write for Animation
Jeffrey Scott
New York: Overlook TP, 2003

Screenwriting: The Sequence Approach
Paul Joseph Gulino
New York: Continuum, 2004

Story: Substance, Structure, Style, and the Principles of Screenwriting
Robert McKee
Methuen Publishing, 2005

The Writer's Journey: Mythic Structure for Writers (Third Edition)
Chris Vogler
Studio City, CA: M. Wiese Productions, 2007

Journals, Websites, and Blogs

The Animation Blog
http://www.theanimationblog.com

Animation Blogspot
http://animationblogspot.com

Animation Magazine
30941 West Agoura Road, Suite 102
Westlake Village, CA 91361
(818) 991-2884
http://animationmagazine.net

Animation World Network
6525 Sunset Boulevard, Garden Suite 10
Los Angeles, CA 90028
(323) 606-4200
http://www.awn.com

Box Office Mojo
http://boxofficemojo.com

Cartoon Brew
http://www.cartoonbrew.com

CG Society of Digital Artists
http://www.cgsociety.org

Cinefex: The Journal of Cinematic Illusions
http://www.cinefex.com

Computer Graphics World
http://www.cgw.com

Cynopsis Media
http://www.cynopsis.com

Daily Variety
5700 Wilshire Boulevard, #120
Los Angeles, CA 90036-3659
(323) 857-6600
http:///www.variety.com

Hollywood Reporter
5055 Wilshire Blvd, 6th Floor
Los Angeles, CA 90036-4396
(323) 525-2000
http://www.hollywoodreporter.com

Jerry Beck's Cartoon Research
http://www.cartoonresearch.com

Kidscreen
Brunico Communications Ltd.
100–366 Adelaide Street West
Toronto, Ontario, Canada M5V 1R9
(416) 408-2300
http://www.kidscreen.com

Voice Casting Resources

Bodalgo.com: The Voiceover Marketplace
http://www.bodalgo.com

Casting Networks Los Angeles
3250 Wilshire Boulevard, Suite 1800
Los Angeles, CA 90010
(323) 462-8200
http://home.lacasting.com

iActor (SAG Online Casting Directory)
5757 Wilshire Boulevard, 7th Floor
Los Angeles, CA 90036-3600
(323) 549-6789
http://www.sag.org/iactor-online-casting

Voicebank.net
25000 Avenue Stanford, Suite 118
Valencia, CA 91355
(877) 294-9910
http://voicebank.net

Key Organizations

Academy of Motion Picture Arts and Sciences
8949 Wilshire Boulevard
Beverly Hills, CA 90211
(310) 247-3000
http://www.oscars.org

Academy of Television Arts and Sciences
5220 Lankershim Boulevard
North Hollywood, CA 91601
(818) 754-2800
http://www.emmys.org

The Animation Academy
2740 W. Magnolia Boulevard, Suite 305
Burbank, CA 91505
(818) 848-6590
http://www.theanimationacademy.com

The Animation Guild
I.A.T.S.E. Local 839
International Alliance of Theatrical Stage and Employees
1105 N. Hollywood Way
Burbank, CA 91505
(818) 845-7000
http://www.animationguild.org

The Creative Talent Network
3500 W. Olive Ave., Suite #300
Burbank, CA 91505
(818) 827-7138
http://www.creativetalentnetwork.com

Director's Guild of America (DGA)
7920 Sunset Boulevard
Los Angeles, CA 90046
(310) 289-2000
http://www.dga.org

International Animation Film Society
ASIFA–Hollywood
2114 W. Burbank Boulevard
Burbank, CA 91506
(818) 842-8330
http://www.asifa-hollywood.org

Producer's Guild of America (PGA)
8530 Wilshire Boulevard, Suite 450
Beverly Hills, CA 90211
(310) 358-9020
http://www.producersguild.org

Screen Actors Guild (SAG)
5757 Wilshire Boulevard, 7th Floor
Los Angeles, CA 90036-3600
(323) 954-1600
http://www.sag.org

Visual Effects Society
5535 Balboa Boulevard, Suite 205
Encino, CA 91316
(818) 981-7861
http://www.visualeffectssociety.com

Women in Animation
http://wia.animationblogspot.com

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